DOE/CE-0362P

Alternative Fuel Vehicles for the Federal Fleet: Results of the 5-Year Planning Process

Executive Order 12759, Section 11

U.S. Department of Energy
Conservation and Renewable Energy
1000 Independence Ave., SW
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August 1992

Federal Energy Management Program
Office of Building Technologies

Office of Alternative Fuels
Office of Transportation Technologies

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1.0 EXECUTIVE SUMMARY

This report presents information gathered from Federal agencies to satisfy implementation requirements of Section 11, "Procurement of Alternative Fueled Vehicles," of Executive Order 12759, "Federal Energy Management," dated April 17, 1991. Section 11 requires that the "maximum number practicable of vehicles acquired annually are alternative fueled vehicles."

The primary goal of implementing Section 11 is to provide early Federal leadership on acquisition and use of alternative fuel vehicles (AFVs). Clean fuel vehicles are required for commercial fleets under Clean Air Act Amendments, and alternative fuel vehicles will be an important option to satisfy these requirements. The National Energy Strategy legislation, currently pending approval by Congress, will require public and private fleets to introduce AFVs at an accelerated pace. Early Federal experience and leadership can help make public and private adoption of AFVs more efficient and less costly.

This report describes five-year plans for acquisition of AFVs by the Federal agencies. These plans will be used to encourage Original Equipment Manufacturers (OEMs) to expand the variety of AFVs produced, reduce the incremental cost of AFVs, and to encourage fuel suppliers to expand the alternative fuel infrastructure and alternative fuel availability. This effort supplements and extends the demonstration and testing of AFVs established by the Department of Energy (DOE) under the Alternative Motor Fuels Act of 1988 (AMFA). The Federal agency five-year plans are critical to the success of the Executive Order implementation. By identifying the needs and requirements at the Federal agencies, we can begin to describe the specific nature of the future Federal fleet, and establish a defined market for OEMs and fuel suppliers.

Subject to availability of funds, targets for AFV acquisition under Section 11 are 5,000 AFVs for the Federal fleet in FY 93, 7,500 in FY 94, and 10,000 in FY 95. In FY 96, 25% of each agencies vehicle acquisitions must be AFVs, rising to 33% in FY97, and 50% in FY 98. These Executive Order targets are consistent with the pending National Energy Strategy legislation. DOE is currently planning to provide funding, subject to availability, to cover reasonable incremental purchase or conversion costs for new and converted AFVs for FY 93 through FY 95. Operating and maintenance costs will be covered by each agency.

This report documents the first attempt by agencies to identify alternative fuels and vehicles that would meet these targets. The DOE and General Services Administration (GSA) are still working with the agencies to refine these estimates, and the plans should be treated as work in progress. Significant and valuable information is contained in the data collected so far, however, and it is appropriate to make this information available.

For FY 93, agencies have requested 5707 AFVs. These include 2865 alcohol fuel vehicles, 2652 natural gas fueled vehicles, and 3 electric vehicles. These requests indicate a strong need among the Federal agencies for alternative fuel light pickups, for AFVs in compact sizes, for natural gas and ethanol vehicles, and a readiness to undertake vehicle conversions.

Implementation of Executive Order 12759 is just getting started. The implementation strategy is designed to help solve the "chicken and egg" problem for widespread introduction of alternative fuels and vehicles. Over the next few months and years, efforts to accelerate the introduction of AFVs into the Federal fleet will continue, including:

- coordination with industry on updates and extensions to agency five-year plans
- coordination with fuel suppliers on expansion of commercially available refueling infrastructure
- expanded cooperative efforts with State/local agencies to maximize the penetration of AFVs in certain areas

continuous sharing of results with Federal agencies, the transportation industry, and the public on the advantages and disadvantages of various alternative fuel applications.

These five-year plans should be treated as a planning document, and not as a procurement request. DOE is currently working with GSA and the Federal agencies to develop specific procurement requests based on these five-year plans, but also considering AMFA requirements, the availability of funds, and GSA regulations. These plans indicate current agency preferences for types of alternative fuels and vehicles. Those preferences may change as the availability and cost of various alternative fuels changes, and as more alternative fuel vehicles become available. The five-year plans will be frequently updated and extended, giving agencies and industry an opportunity to compare preferences and requirements with availability. DOE will be working actively to encourage coordination between industry and the Federal agencies at all levels.

Progress on implementation of the Executive Order has already led to the development of a similar program at the State level. DOE is working with State governments to develop five-year plans for AFV acquisition at the State level. In the future, Federal, State, and local government requirements for AFVs can be combined to provide a comprehensive market description for industry. Results from the coordinated Federal-State program will be made available as soon as possible.

Information on the Executive Order, on State and local programs and all DOE alternative fuel activities can be obtained by calling the National Alternative Fuels Hotline. The number is 800-423-1DOE. In the Washington, DC area, the number is 202-554-5047.

2.0 INTRODUCTION

Executive Order 12759 of April 17, 1991, Federal Energy Management, Section 11, "Procurement of Alternative Fueled Vehicles", states:

The Secretary of Energy, with the cooperation of other appropriate agencies, and consistent with other Federal law, shall ensure that the maximum number practicable of vehicles acquired annually are alternative fuel vehicles as required by the Alternative Motor Fuels Act of 1988 [42 U.S.C. 6374.] Subject to availability of appropriations for this purpose, the maximum number practicable of alternative fuel vehicles produced by original equipment vehicle manufacturers shall be acquired by the end of model year 1995.[1]

The primary goal of implementing Section 11 is to provide early Federal leadership on acquisition and use of alternative fuel vehicles (AFVs). Clean fuel vehicles are required for commercial fleets under the Clean Air Act Amendments, and AFVs will be an important option to satisfy these requirements. The National Energy Strategy legislation, currently pending approval in Congress, will require public and private fleets to introduce AFVs at an accelerated pace. Early Federal experience and leadership can assist in the adoption of AFVs in commercial fleets.

Federal acquisition of alternative fuel vehicles will be used to encourage suppliers to expand the alternative fuel infrastructure and alternative fuel availability, and encourage Original Equipment Manufacturers (OEMs) to expand the variety of AFVs produced and reduce the incremental cost of AFVs. This effort moves beyond the demonstration and testing of AFVs established by the Department of Energy (DOE) under the Alternative Motor Fuels Act of 1988 (AMFA).

3.0 IMPLEMENTATION OF THE EXECUTIVE ORDER

3.1 Strategy

The Executive Order gives leadership responsibility to DOE for implementation of Section 11. At DOE, the overall responsibility for implementation of Executive Order 12759 is given to the Office of Federal Energy Management Programs (FEMP). The Office of Alternative Fuels (OAF)

shares the responsibility with FEMP, bringing technical expertise and resources on alternative fuel technologies.

The core strategy for Section 11 is the development of a Federal five-year plan for introduction of AFVs. This plan will be used to work with OEMs to make the requested vehicles available and with fuel suppliers to make the fuels available at the proper locations.

Two decisions early in the DOE implementation of Section 11 have eased the process considerably. First, efforts were focused on development of a guidance document rather than a regulation. This gave the opportunity to communicate strategies, goals, and requests for information without the overhead, red-tape, and stigma associated with regulations.

Second, concerned agencies were involved in the process early through existing interagency working groups. This gave agencies an early opportunity to influence DOE plans, enabled early highlighting of problem areas, generated new ideas, and increased buy-in. Relationships developed during the early working group sessions are now serving to smooth the implementation process.

3.2 Interagency Consultation

Interagency consultation on energy matters is conducted at several levels. At the Assistant Secretary level, the Federal Interagency Energy Policy Committee (the "656" committee) meets as necessary to confirm program plans developed by the Federal Energy Management Program Office at DOE. The 656 Committee was involved in the early stages of the DOE implementation and gave approval for the guidance document developed for agency use.

At the working-group level, the Interagency Motor Equipment Management Committee (IMEMC) is where transportation officials from the Federal agencies worked on details of the guidance document and implementation of Section 11. The IMEMC committee had established a working group to discuss regulations for Section 10 (for reduced oil consumption) of the Executive Order and members of the working group were asked to extend their participation to contribute to development of the guidance document for Section 11. The IMEMC working group began meeting in September, 1991 and continued meeting frequently until completion of the draft guidance document in November, 1991. DOE worked closely with the General Services Administration (GSA) on the development of the guidance document for Section 11. Interagency coordination continues through these groups and others, such as the Interagency Committee on Alternative Fuels and Low Emission Vehicles (Interfuel Group).

Figure 1 shows anticipated interagency coordination for implementation of the guidance document.

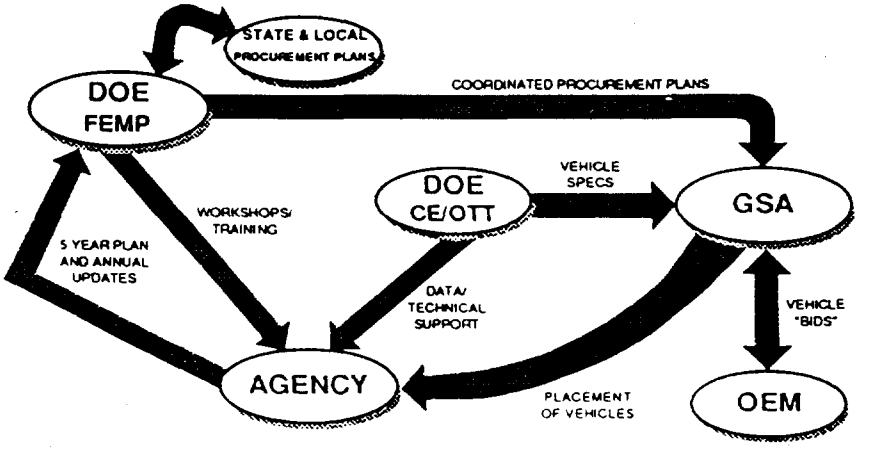

Figure 1. Interagency Coordination for Implementation of Section 11 Guidance Document

3.3 Guidance Document

The guidance document developed by DOE with interagency consultation establishes a policy goal for providing Federal leadership on AFVs to encourage auto manufacturers and fuel suppliers to expand the availability of alternative vehicles and fuels. Figure 2 shows the target acquisition of AFVs through Fiscal Year 1998. Subject to availability of funds, targets for AFV acquisition are:

FY93	5,000 AFVs
FY94	7,500 AFVs
FY95	10,000 AFVs
FY96	25% of Agency acquisitions
FY97	33% of Agency acquisitions
FY98	50% of Agency acquisitions

3.3.1 Major Elements

The implementation strategy is based on each agency developing a five-year plan, with DOE and GSA assistance, for introduction of AFVs. An overall Federal plan will be used to encourage auto manufacturers to expand availability of AFVs and reduce costs. DOE and GSA will coordinate agency fuel requirements to encourage development of commercial sector fuel infrastructure.

DOE will coordinate evaluation of the five-year plans; provide data, guidance, and training to agencies; work with GSA to establish procurement procedures; and provide guidance on conversion of existing vehicles.

Funding will be provided subject to availability, to cover reasonable incremental purchase or conversion costs for new and converted AFVs for the first three years. Operating and maintenance costs will be covered by each agency. Disposal costs, if there are any, will be covered by DOE for the first three years.

Introduction of AFVs across the Federal fleet as early as FY92 or FY93 may be constrained by limited availability of vehicle models, high costs, and limited infrastructure. Until additional OEM models are available, converted vehicles may be the best choice for some agencies. DOE will guide agencies in determining the appropriate mix of OEM and converted vehicles to achieve their goals at reasonable cost.

3.3.2 Scope and Applicability

The implementation of Section 11 is directed at commercially-designed, Government Owned and Leased Vehicles being operated in the fifty

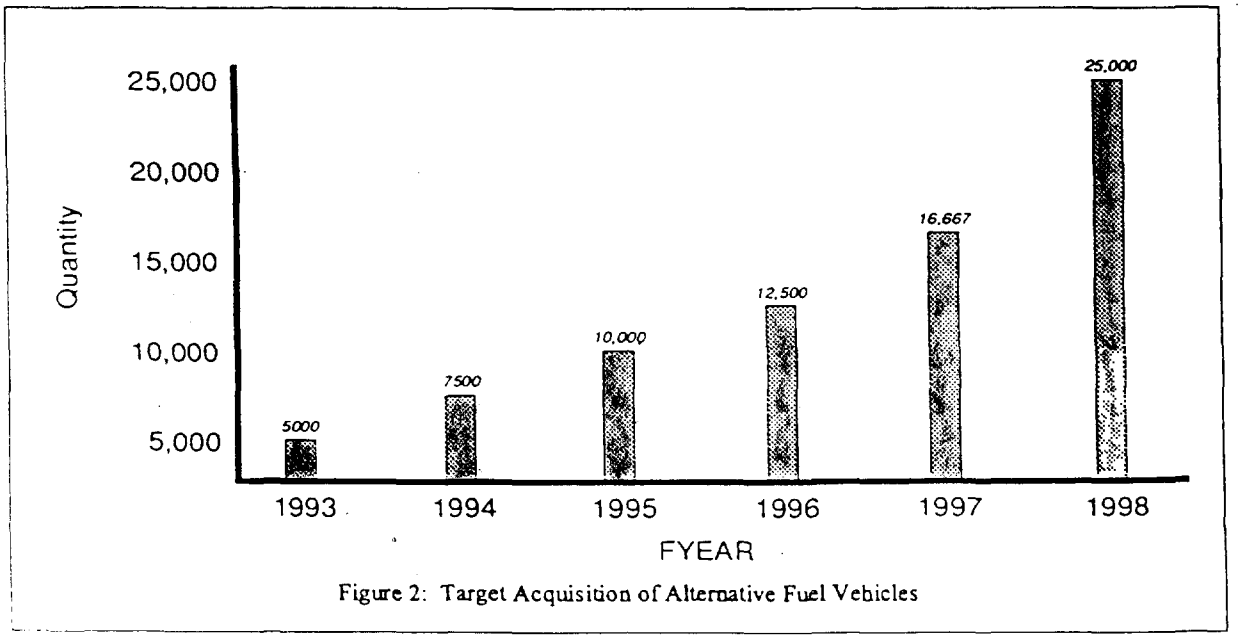

Figure 2: Target Acquisition of Alternative Fuel Vehicles

United States, the District of Columbia, and the Commonwealth of Puerto Rico. It shall also apply to Government-Owned, Contractor Operated Vehicles, as the contractors are acting as representatives of the Federal government. It shall not apply to law enforcement, emergency, or special purpose vehicles and equipment.

All executive agencies (as defined in Section 105 of Title 5 United States Code) which operate 300 or more motor vehicles will participate fully in implementation of Section 11. Currently, agencies that operate less than 300 vehicles are encouraged to participate in acquisition of alternative fuel vehicles to the extent possible.

The implementation of Section 11 is primarily addressed at light-duty sedans and trucks and medium-duty vehicles. This does not exclude participation by agencies who desire to acquire alternative fuel heavy-duty, law enforcement, and special purpose vehicles. Each agency will designate the most appropriate alternative fuels and technologies for the specific applications and needs within that agency.

Agencies are encouraged to focus vehicle acquisitions in non-attainment areas as defined by the Clean Air Act Amendment of 1990, when developing plans for AFV acquisitions, as well as in those areas where demonstration of alternative fuels capability and establishment of an alternative fuels infrastructure are deemed appropriate. GSA will concentrate their purchases of AFVs for the leased fleet in the non-attainment areas. When possible, DOE will help to coordinate Federal AFV purchases with State and local government AFV purchases, to maximize the incentives for private development of the fueling and service infrastructure.

3.4 Technical Assistance Provided by DOE

One of the primary responsibilities of DOE is to provide technical assistance on alternative fuel vehicles and technologies to the agencies. In addition to the guidance document and five-year planning framework, the following resources were identified and made available to the agencies early in the five-year planning process:

- Background report on alternative fuel vehicle types and technologies
- Bibliography of literature sources on alternative fuels
- Hotline telephone service for information on alternative fuels
- Electronic, on-line access to the Alternative Fuels Data Center
- Safety and emissions issues for conversions
- Guidelines for appropriate conversion programs.

DOE will attend conferences and conduct several workshops at various sites around the country and develop AFV orientation/training programs. The purpose of the workshops would be to increase awareness of alternative fuels among Federal managers, provide an informational/educational forum, and address specific issues associated with introducing, converting, and operating AFVs. Additional resources will continue to be identified and made available to the agencies as they become available, through interagency working groups and at the workshops.

4.0 TARGET ALTERNATIVE FUEL TECHNOLOGIES

The Executive Order does not limit the Federal fleet to certain types of alternative fuels or vehicles. The implementation strategy is designed to assess Federal agency needs and requirements for alternative fuels--so no fuels were endorsed or eliminated ahead of time. Availability and cost were important factors in agency choices for alternative fuels and vehicles.

4.1 Fuels

One of the goals of the Executive Order is to help establish the re-fueling infrastructure for alternative fuels to expand their use. Thus, the primary emphasis will be on those alternative fuels that are already in common usage. The principal alternative fuels that are being considered by the agencies are:

- Methanol and M85
- Ethanol and E85
- Compressed Natural Gas (CNG)
- Liquefied Natural Gas (LNG)
- Liquefied Petroleum Gas (LPG)
- Electricity.

Other alternative fuels, such as Hydrogen, can be considered by the agencies if desired.

Many Federal agencies are already significant consumers of "gasohol", a blend of 10% ethanol and gasoline. Gasohol, reformulated gasoline, oxygenates and other additives, are not considered alternative fuels for the purposes of Section 11 of the Executive Order. The use of these non-petroleum components, however, will help agencies meet the goals of Section 10 of the Executive Order which calls for reduction of petroleum consumption by the Federal Motor Vehicle Fleet.

4.2 Vehicles

The vehicles using these alternative fuels can be of any appropriate technologies. Most will have traditional internal combustion engines in the short to mid-term. Over the longer term, the Federal fleet will adopt the more advanced alternative technologies, such as fuel cells and hybrids, as they become available at reasonable cost. The primary vehicle types considered fall into three classes: dedicated; dual fuel; and flexible fuel.

4.2.1 Dedicated

A dedicated vehicle operates only on the alternative fuel. This design reduces the number of components required and allows the engine/fuel system to be optimized for the alternative fuel. For fuels with a lower energy content than gasoline a dedicated vehicle has a limited range compared to a similar conventional vehicle.

4.2.2 Dual Fuel

A dual fuel vehicle can operate on either an alternative fuel or a conventional fuel (gasoline or diesel). Dual fuel vehicles usually have an automatic or manual switch that allows operation on either fuel, and have at least one fuel tank for each fuel. This design has more fuel system components than a dedicated vehicle, but allows an agency to use AFVs in an area where the infrastructure is not well developed. Most dual fuel vehicles are a combination of natural gas and gasoline or LPG and gasoline.

4.2.3 Flexible Fuel

A flexible fuel vehicle (FFV) has only one fuel tank that can contain mixtures of the alternative fuel and gasoline. A sensor determines the percentage of the alternative fuel relative to gasoline and adjusts engine parameters automatically. Until methanol and ethanol become more widely available, FFVs are the preferred option for alcohol fuel vehicles because they perform quite well on gasoline.

5.0 THE FEDERAL FIVE-YEAR PLAN FRAMEWORK

The agency five-year plans include vehicle acquisition estimates for the number of alternative fuel vehicles projected to be purchased, leased, or converted by the agency during each fiscal year, listed by vehicle type and fuel requirement. The size, engine size, fuel configuration, and fuel type of each AFV is included. Agencies also discuss projected re-fueling approaches and needs. The first five-year plan covers fiscal years 1993 - 1997.

Agencies have also provided projected geographic locations for both purchased and leased vehicles to assist DOE and GSA in matching available vehicles with agency needs and establish early information on location and type of required infrastructure. Information on the number of conventional vehicles acquired annually will be used to establish baselines for the years FY96 and later. Data provided by the agencies will be updated annually, as more accurate information for projections becomes available.

A spreadsheet format was provided to help agencies in developing the five-year plans. The spreadsheet is in Lotus 1-2-3 format to facilitate standardization of the spreadsheets between

agencies. Table I shows the menu of alternative fuel and vehicle types that agencies were asked to use to develop their five-year plans. The menu includes: vehicle types, such as sedans and pickups; engine size; alternative fuel types, such as alcohols, CNG and LPG; and configuration and acquisition aims. However, agencies are encouraged to identify additional vehicle types/technologies when desired.

Table II shows the example spreadsheet that was distributed to each agency with the guidance document. In this example, different vehicle types are shown for various fuels and locations.

6.0 COORDINATION WITH INDUSTRY

6.1 Original Equipment Manufacturers (OEMs)

The Federal government purchases or leases about 50,000 new light-duty vehicles each year. The Federal five-year plan is designed to provide OEMs with the necessary information to meet the AFV requirements of the Federal agencies. With the information in the Federal five-year plan, OEMs will be able to identify needed vehicle types and move to make those available over the five-year period. The Federal five-year plan will be frequently updated and extended, giving OEMs the opportunity to refine or revise plans accordingly.

Because of the diverse vehicle requirements of the Federal agencies, successful implementation of Section 11 will require many models of AFVs that are not currently available. The five-year plan will allow the OEMs to focus their efforts on the required models, reducing up-front development costs. With a defined market at the Federal agencies, OEMs can tailor materials orders and build schedules to keep costs low. Successful coordination of Federal and State/local AFV requirements will give OEMs access to even

Table I: Menu of Alternative Fuel Vehicle Types and Technologies for Use in Agency Five-Year Plans

Suggested alternative fuel types and technologies are listed below to help in developing the summary five-year plans.

These are suggestions, and additional types/technologies may be specified if desired.

Vehicle Type	Engine Size (cyl)	Alternative Fuel Type	Configuration	Acquisition Approach
Sedans Compact Mid-size Full-side Light-Duty Trucks Compact pickup Full-size pickup Vans Mini-van 8 passenger van 12 passenger van Medium-Duty Trucks (please describe)	4 cyl 6 cyl 8 cyl	Methanol M85 Ethanol E85 Compressed Natural Gas (CNG) Liquified Natural Gas (LNG) Liquified Petroleum Gas (LPG) Electric	Dual Fuel Dedicated Flexible Fuel	Currently Owned Purchased Leased - GSA Leased - Commercial

Table II: Example Five-year Plan Summary
Alternative Fuel Vehicle Five-Year Plan Summary
for Fiscal Years 1993 through 1997

Agency: Sample Agency Name Fiscal Year: 1993
Prepared By: Bob Smith Date Prepared: April 1, 1992
Telephone No.: 202-555-5555 Total Agency Vehicle Acquisition this Year: 500

Vehicle Type	Engine Size (cyl)	Alternative Fuel Type	Configuration	Acquisition Approach	Quantity OEM	Quantity Converted (Not OEM)	Geographic Location
Mid-size sedan	6	Ethanol	Flexible Fuel	Purchased	5		Peoria, IL
Compact sedan	4	Methanol	Flexible Fuel	Leased-GSA	10		Los Angeles, CA
Compact pickup	4	CNG	Dedicated	Purchased	5		Yosemite, CA
Full-size pickup	8	CNG	Dual fuel	Currently owned		5	Denver, CO
8 passenger van	8	CNG	Dual fuel	Purchased	15		Denver, CO
8 passenger van	8	CNG	Dual fuel	Purchased	8		Washington, DC
Medium duty truck	8	LNG	Dual fuel	Currently owned		2	Las Vegas, NV
Totals					43	7	

more information to guide their manufacturing decisions.

In addition, DOE will work with industry to establish and certify training programs for technicians responsible for maintaining AFVs and converting vehicles to alternative fuel operation. The training programs shall include specialized maintenance and safety procedures, motor vehicle operating procedures, proper and safe conversion equipment installation procedures and techniques, adherence to specification, emissions testing, and other appropriate mechanical concerns.

The type of information that will be given to OEMs is illlustrated in the Appendices. Appendix A summarizes agency requests by vehicle type. Appendix B shows an acquisition planning worksheet that can be used to assess vehicle availability.

6.2 Fuel Suppliers

The Executive Order strategy is directed at resolving the "chicken and egg" problem for alternative fuels. By working closely with Federal agencies and OEMs to plan for AFV placement, we will establish a firm, multi-year market target for alternative fuel suppliers. By working directly with those suppliers, we can ensure that the infrastructure will be developed to provide the alternative fuels needed for the AFVs.

Our primary goal is to expand the availability of alternative fuels at commercial (private sector) facilities where they currently exist and encourage establishment of more facilities in new locations. The primary emphasis will be on development of commercial facilities, not government owned facilities. Efforts to encourage the development of commercial alternative fuel infrastructure will focus in three areas: geographic location; innova-

tive procurement mechanisms; and state/local coordination. Agency requests for various alternative fuels and vehicles will be shared with fuel suppliers to help define infrastructure needs. Appendix C summarizes the information by location.

6.2.1 Geographic Location

With the development of the Federal five-year plans, agencies will identify locations for the placement of AFVs. Working with GSA, DOE will coordinate agency placement programs to concentrate vehicle placement to take maximum advantage of re-fueling infrastructure. First priority for the placement of the GSA leased fleet will be in the twenty-two non-attainment areas specified by the Clean Air Act Amendments of 1990[2]. This effort will give an added boost to programs in those areas that want to use alternative fuels to comply with environmental regulations. We anticipate that early Federal experience can help smooth the introduction of AFVs into those non-attainment areas.

Agency-owned AFVs will be placed in locations that fit the mission of each agency and the requirements of their AFV program. This may include locations that are outside of the non-attainment areas. For example, the Interior and Agriculture Departments have a substantial number of vehicles located outside of those areas. Again, DOE will work with the agencies to coordinate placement of the vehicles and the establishment of the needed fuel infrastructure.

6.2.2 Innovative Procurement Mechanisms

Under the Executive Order guidance, individual agencies will be responsible for the incremental costs of operating and maintaining their AFVs. Principal among these will be the fuel cost. In many cases, however, fuel suppliers may be willing and able to help agencies manage fuel costs through innovative procurement mechanisms. Credits, rebates, and State subsidies may all be options for agencies in different areas. DOE will be coordinating with the fuel suppliers to encourage the development of these cost-sharing options. For example, a natural gas fuel supplier may offer to establish a re-fueling facility for agency vehicles in exchange for agency purchase of the natural gas fuel. This would allow the agency to avoid up-front costs for infrastructure, while providing the fuel supplier with a known fuel demand. Where possible, priority will be placed on commercial refueling facilities that are available to public and private customers.

6.2.3 State/local Coordination

Federal purchase of vehicles is much smaller than the combined purchases by State and local agencies. DOE has begun a process to reach out to these groups through the DOE Regional Support Offices (RSOs). Using the Federal five-year plan as a model, the RSOs will serve as leaders and facilitators for a State/local working groups on development of regional guidance documents and multi-year plans. DOE will coordinate the results with the Federal five-year plan to bring the additional information to the attention of the OEMs and fuel suppliers. A coordinated Federal/State/local plan would have many more AFVs, and offer a most significant market incentive to industry. Furthermore, early Federal leadership on alternative fuels could make them a more attractive option for States considering their use for compliance with environmental regulations.

6.3 The Role of Conversions

The strategy for Section 11 emphasizes OEM vehicles, but also has a role for conversion of conventional vehicles to alternative fuel vehicles after manufacture. The strategy is aimed at building OEM model availability over the long-term, with judicious use of conversions in the short-term to meet agency requirements.

Consultation with Federal agencies has already indicated that currently available OEM vehicles may not meet all the Federal requirements in the short-term. It is expected that agencies will identify the need for additional numbers and models that will be required to meet the Executive Order goals of 5,000 vehicles in fiscal year 1993.

Conversions of conventional vehicles to alternative fuel vehicles can be an attractive way to meet agency needs in the short-term, until OEMs are able to design and manufacture the required vehicle types. Conversions can provide agencies with the flexibility to introduce alternative fuels into their fleets while keeping operational changes to a minimum. Agencies can choose between converting existing vehicles that are known to satisfy operating requirements, or identify and convert a new vehicle that meets the agency needs.

With proper training, agency personnel can convert and maintain alternative fuel vehicles at agency facilities. Conversions give agencies additional flexibility to rely on in-house technical expertise, if available, or to contract out for conversion services. All conversions, however, will have to meet quality, safety, and emissions standards. In some cases, OEM dealers can provide a conventional vehicle that is converted to alternative fuel with OEM authorization, and completely warranted by the OEM.

Funds appropriated for alternative fuels will be used to pay the incremental cost of the converted vehicle as compared to a conventional vehicle of the same type. Conversions give the agencies the additional flexibility of introducing alternative fuels without incurring the cost of purchasing new vehicles. For example, an agency can establish an alternative fuel fleet without any up-front costs for the vehicles themselves. The agency will then be responsible only for operating and maintenance costs of the alternative fuel vehicle.

With the appropriate use of conversions, the introduction of alternative fuel vehicles can proceed at a much faster pace than with reliance on OEM vehicles alone. By maintaining the numerical goals for AFVs as established by the Executive Order, there will be significant incentives for fuel suppliers to identify and establish the needed re-fueling infrastructure. This infrastructure will be vital to the expanded use of AFVs throughout the country. Furthermore, if OEMs are not able to introduce models quickly enough to meet Federal needs, conversions will allow agencies to maintain momentum in their AFV programs and meet their alternative fuel goals.

6.4 Conversion Companies

DOE will coordinate agency efforts, provide resources to facilitate agency conversions, and work directly with conversion companies to satisfy agency needs.

6.4.1 Identify Quality, Safety, and Emissions Requirements

All conversions must meet appropriate Federal, State, and local regulations. The Environmental Protection Agency (EPA) is developing regulations for vehicle conversions, but in the interim requires that all conversions do not impair the emissions control equipment of the vehicle. The EPA recognizes conversion kits certified by the State of California as meeting this requirement.[3] Most states have specific regulations dealing with conversions. Also, the American Gas Association certifies natural gas conversion equipment to meet quality and safety standards.

6.4.2 Establish Conversion Guidelines

DOE has established conversion guidelines that will give Federal agencies a sound basis for evaluating potential conversion programs. The guidelines provide a cost-analysis framework for consideration of conversion costs, fuel costs, operating costs, etc. The guidelines will also include what types of vehicles are appropriate for conversion.

6.4.3 Establish Innovative Procurement Procedures

Conversions and retrofits done on existing and new agency-owned vehicles may require some innovative funding procedures. DOE will be establishing appropriate procurement procedures that provide Federal agencies with high-quality, reliable conversions on a consistent basis. DOE will work with fuel suppliers and equipment manufacturers to encourage cost-sharing through credits or rebates.

7.0 CONCLUSIONS

7.1 Results of First Five-Year Plan

The first Federal agency five-year plan has proven the willingness of Federal agencies to operate alternative fuel vehicles in their fleets. The number of AFVs requested by each agency over the five-year period is provided in Appendix D in addition to the number of leased and owned vehicles.

Figure 3 presents data on total agency requests compared to the target acquisitions of AFVs. Although the target acquisition of AFVs was only met in FY 93, this result was anticipated since this is the initial five-year plan submitted by each agency. DOE is currently working with the individual agencies to increase the number of vehicles requested for the out years of the five-year plan.

The first Federal five-year plan indicates a strong need among the Federal agencies for AFVs in compact sizes, alternative fuel light pickups, and a readiness to undertake vehicle conversions. The plan also shows a strong initial demand for natural gas vehicles followed by increasing requests for alcohol fuel vehicles.

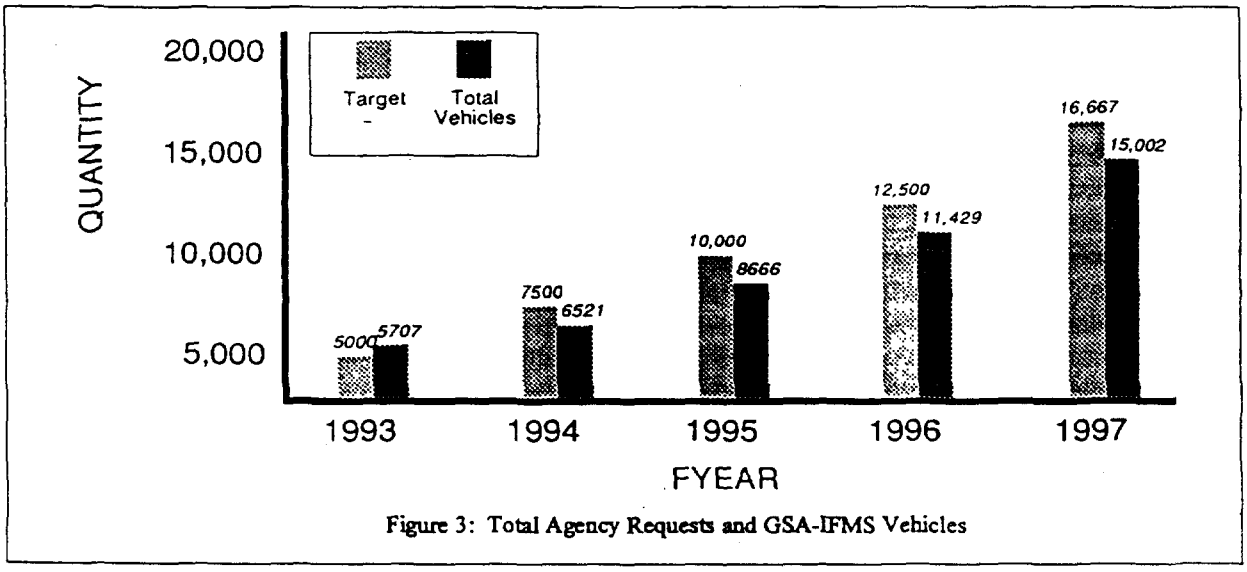

Figure 3: Total Agency Requests and GSA-IFMS Vehicles

Figure 4: Requested Locations for Alternative Fuel Vehicles

requesting vehicles in every state. The number of vehicles requested for placement in non-attainment areas is 27% of the vehicles requested in FY93 that have an identified location at this time. Appendix C summarizes information on AFVs requested for placement in each state and city by fiscal year.

Additional information on specific geographic locations is accessible via the Alternative Fuels Data Center or through the DOE Hotline. Appendix E gives an example of detailed database information that is available from these sources.

7.1.1 Need for AFVs in Small and Compact Sizes

Most Federal agencies are required to lease and purchase the smallest class of vehicle that will meet their mission requirements. Mid-size sedans, large-size sedans, and 3/4 ton pickups are the exception in the Federal fleet. The five-year plan indicates the greatest need for AFVs in the Federal fleet will be in four cylinder, compact sedans and four/six cylinder compact pickup trucks. Additional vehicle types have been requested but are not currently available from OEMs. The following table shows the additional AFV types that are needed to meet Federal requests. These will be requested from the OEMs for delivery starting in FY93.

Flexible Fuel Ethanol & Methanol	Gaseous Fuel
Mini Van	Mini Van
Compact Sedan	Compact Sedan
Compact Pickup	Mid Size Sedan
Fullsize Pickup	4x4 Pickup
8 Passenger Van	Utility Truck
4x4 Pickup	Light Duty Truck
Full Size Sedan	
Light Duty Truck	
Medium Duty Truck	
Utility Truck	

7.1.2 Need for Alternative Fuel Light Pickups

Agency requirements for light trucks far exceed the number available from OEMs. Figure 5 shows the percentages of fuel types in the agency requests for alternative fuel pickups. Early agency requests favored CNG pickups, however, agency requests for alcohol fuel pickups grew steadily in the out-years. CNG pickups from OEMs have been 3/4 ton pickups, when most agencies prefer compact sizes. Light pickups in both CNG and FFV formats would be an important addition to the OEM capabilities. The need for pickups is

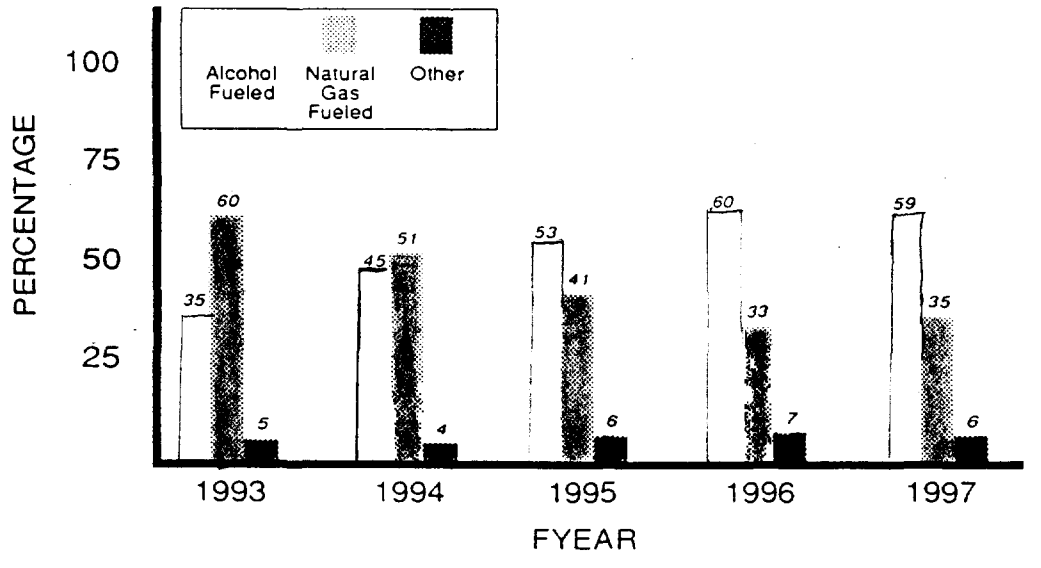

Figure 5: Agency Requests for Alternative Fuel Pickups

further enhanced at those agencies that want to reduce costs by selecting one alternative fuel for both sedans and trucks.

7.1.3 Readiness to do Conversions

Many agencies have already indicated they prefer OEM vehicles, but are ready to go with conversion vehicles to meet the Executive Order Requirements because of their flexibility to meet a specific mission requirement. Agencies also believe that conversions will fill a short-term need as indicated by the decline in requests for conversions in the out years of the five-year plan. Figure 6 illustrates the decline in requests for conversions over the five year period.

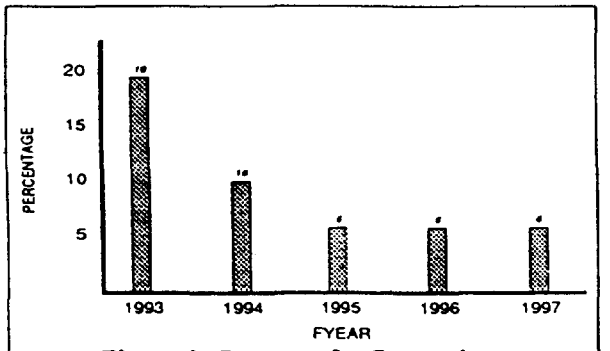

Figure 6: Requests for Conversions

7.1.4 Strong Initial Demand for Natural Gas Vehicles

Many agencies have already indicated they are giving strong consideration to natural gas vehicles because of the widespread access to the fuel at reasonable prices. In some cases, natural gas is available at prices lower than gasoline, though refueling infrastructure is a problem. This interest in natural gas vehicles could send a strong signal to the OEMs to make more natural gas vehicles available. Figure 7 shows that natural gas was the preferred fuel for pickups, vans and other types of vehicles, except sedans, in FY93.

7.1.5 Increasing Requests for Alcohol Fuel Vehicles

The number of alcohol and natural gas fuel vehicles requested in Fiscal Year 1993 were nearly identical. Figure 8 illustrates the increasing number of requests for each fuel type in the

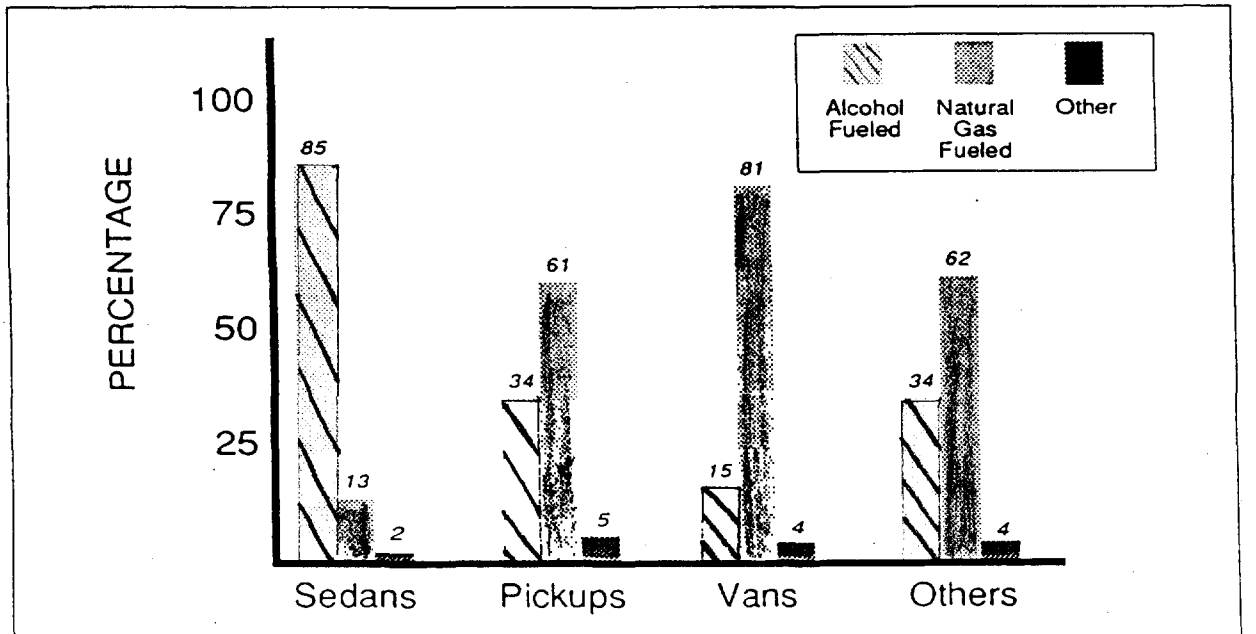

Figure 7: Fiscal Year 1993 Agency Requests for Alternative Fuel Vehicles
Note: Other includes LPG and electric Vehicles

out years of the five-year plan, however, the increase in requests for alcohol fuel vehicles exceeded that for natural gas fuel vehicles.

The alcohol fuel vehicles requested were both methanol and ethanol fueled. Some agencies requested flexible fuel vehicles that would operate on any combination of ethanol, methanol, and gasoline. Despite the fact that ethanol vehicle development has lagged behind methanol vehicle progress, agencies still exhibited a growing interest in ethanol vehicles. This trend can be seen in Figure 9 which shows the increasing percentage of ethanol requests among the alcohol fuel vehicle requests.

7.2 Next Steps

Completion of the first Federal five-year plan is an initial step in the implementation of Executive Order 12759 . The implementation strategy is designed to help solve the "chicken and egg" problem for widespread introduction of alternative fuels and vehicles. Over the next few months

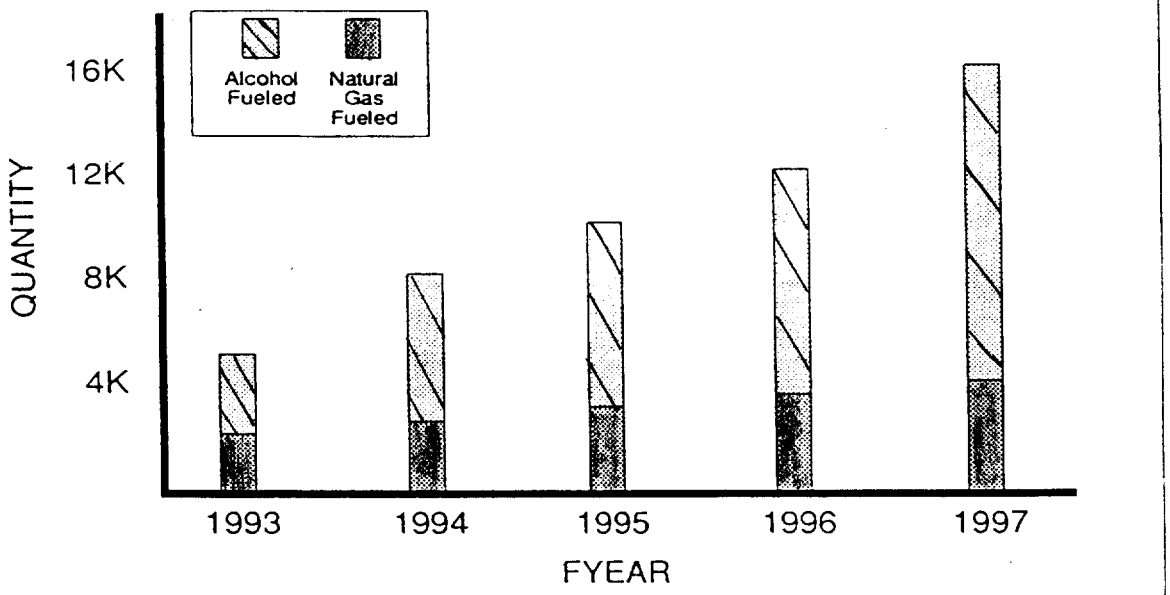

Figure 8: Requests for Alcohol and Natural Gas Fueled Vehicles

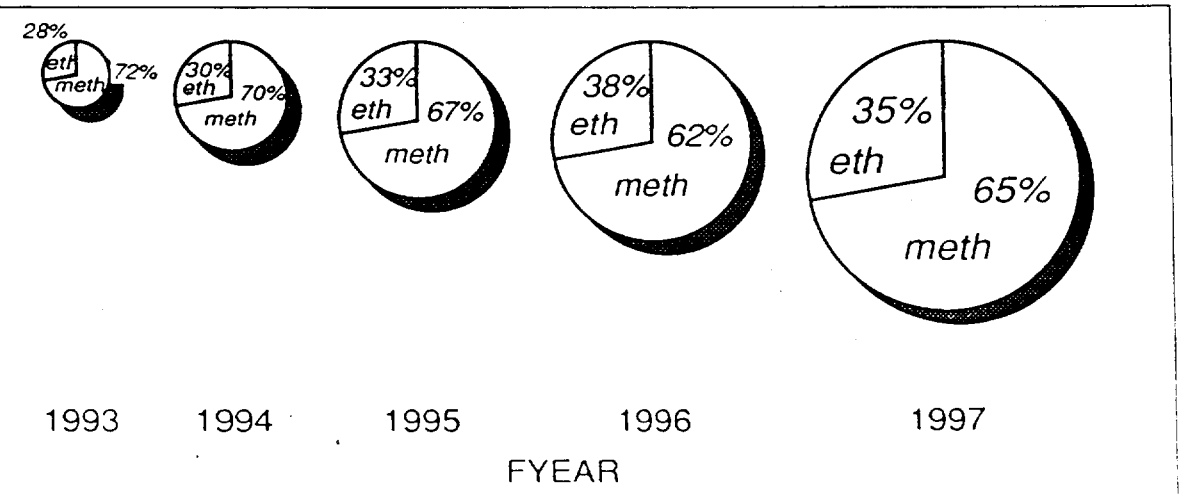

Figure 9: Breakdown of Alcohol Fueled Vehicle Requests

and years, efforts to accelerate the introduction of AFVs into the Federal fleet will continue.

DOE and GSA will continue to work closely with OEMs and fuel suppliers as the agency five-year plans are updated and extended. Initial updates will emphasize increasing the number of vehicles requested in the out years of the plan, matching OEM availability with agency needs, and building on experience gained from AFV fleet operations.

Continuous interagency consultation has been important to the success of the implementation program. It will continue to be important as the placement of AFVs at the Federal agencies accelerates over the next few years. The 656, IMEMC, and Interfuel Committees will continue to provide forums for interagency consultations to confirm program plans. The 656 committee will continue to monitor the implementation of Executive Order 12759.

The effort to coordinate the planned acquisition of AFVs for Federal agency fleets with those of State/local agencies will be expanded. DOE Regional Support Offices will continue to interact closely with the State and local agencies and provide them with technical assistance for the development of five-year State/local plans.

Workshops and training seminars will be held for Federal fleet managers. The emphasis of the workshops is to provide information on how to best establish, operate, and maintain an AFV fleet. This program will be expanded to include State/local fleet managers, to satisfy requirements under the pending NES legislation.

DOE will continue to share information with Federal agencies, the transportation industry, and the public on the advantages and disadvantages of various alternative fuel applications. The National Alternative Fuels Hotline for Transportation Technologies has been established and will continue to provide up-to-date information on Alternative Fuel Technologies. Consumers nationwide can call 800-423-1DOE, except in Washington, DC, where consumers must call (202) 554-5047.

NOTES

1. "Federal Energy Management: Executive Order 12759 of April 17, 1991," Federal Register, Vol. 56, No. 76, Friday, April 19, 1991, Presidential Documents.

2. Serious, severe, or extreme non-attainment areas under the National Ambient Air Quality Standards (NAAQS) for ozone and carbon-monoxide.

3. Mobile Source Enforcement Memorandum No. 1A, Office of Enforcement and General Coounsel, U.S. Environmental Protection Agency, Washington, D.C., June 25, 1974.

APPENDIX A
ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ACQUISITION YEAR 1993

VEHICLE TYPE	QTY ALCOHOL	QTY NAT GAS	QTY OTHER	QTY PURCHASED	QTY LEASED	QTY OWNED	TOTAL
Bus	13	0	0	0	13	0	13
Carryall - 4x4 Compa	2	1	0	2	1	0	3
Carryall - 4x4 Full	1	0	0	0	1	0	1
Carryall - Compact	1	24	1	7	6	13	26
Carryall - Full Size	0	5	2	3	4	0	7
Electric Cart	0	0	2	2	0	0	2
Golf Cart	0	33	0	33	0	0	33
Pickup - 4x4 Compact	15	16	1	10	22	0	32
Pickup - 4x4 Full Sz	37	66	8	12	99	0	111
Pickup - Compact	529	517	70	394	536	186	1116
Pickup - Crew Cab	0	16	0	11	0	5	16
Pickup - Full Size	89	635	15	90	444	205	739
Pickup - Utility	0	0	2	0	0	2	2
Sedan - Compact	1726	256	14	162	1680	154	1996
Sedan - Delivery	0	1	0	0	0	1	1
Sedan - Full Size	23	11	1	0	35	0	35
Sedan - Law Enf	0	13	10	7	0	16	23
Sedan - Mid Size	129	13	0	32	103	7	142
Sedan - Subcompact	3	2	9	10	4	0	14
Sta Wgn - Compact	9	17	3	6	23	0	29
Sta Wgn - Full Size	1	0	0	0	1	0	1
Sta Wgn - Subcompact	1	0	0	1	0	0	1
Truck - Cargo	6	10	0	0	6	10	16
Truck - Heavy Duty	20	12	0	2	20	10	32
Truck - Light Duty	35	18	0	0	53	0	53
Truck - Medium Duty	13	155	0	8	160	0	168
Truck - Multistop	6	0	2	8	0	0	8
Truck - Panel	0	9	0	9	0	0	9
Truck - Utility	8	49	4	40	3	18	61
Truck - Utility 4x4	54	1	10	4	11	50	65
Van (8)	90	282	26	42	285	71	398
Van (12)	0	18	0	15	3	0	18
Van (15)	3	244	0	7	225	15	247
Van - Cargo	6	1	9	0	7	9	16

ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ACQUISITION YEAR 1993

VEHICLE TYPE	QTY ALCOHOL	QTY NAT GAS	QTY OTHER	QTY PURCHASED	QTY LEASED	QTY OWNED	TOTAL
Van - Maxi	2	0	0	0	2	0	2
Van - Mini	39	190	0	24	44	161	229
Van - Mini Cargo	1	0	0	1	0	0	1
Van - Panel	0	13	0	1	0	12	13
Van - Panel 4x4	0	3	0	0	0	3	3
Van - Step	0	22	0	9	0	13	22
Van - Wagon	3	0	0	3	0	0	3
TOTAL	**2865**	**2653**	**189**	**955**	**3791**	**961**	5707

ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ACQUISITION YEAR 1994

VEHICLE TYPE	QTY ALCOHOL	QTY NAT GAS	QTY OTHER	QTY PURCHASED	QTY LEASED	QTY OWNED	TOTAL
Bus	18	1	0	2	17	0	19
Carryall - 4x4 Compa	0	3	0	0	3	0	3
Carryall - 4x4 Full	5	0	0	2	3	0	5
Carryall - Compact	2	13	0	7	5	3	15
Carryall - Full Size	0	7	1	6	2	0	8
Electric Cart	0	0	2	2	0	0	2
Golf Cart	0	38	0	38	0	0	38
Pickup - 4x4 Compact	23	19	2	18	26	0	44
Pickup - 4x4 Full Sz	48	66	10	22	102	0	124
Pickup - Compact	863	647	56	763	642	161	1566
Pickup - Crew Cab	0	11	0	11	0	0	11
Pickup - Full Size	181	585	30	282	358	156	796
Sedan - Compact	1979	142	34	438	1669	48	2155
Sedan - Delivery	0	1	0	0	0	1	1
Sedan - Full Size	30	21	1	17	31	4	52
Sedan - Mid Size	146	22	6	44	122	8	174
Sedan - Subcompact	5	8	14	20	5	2	27
Sta Wgn - Compact	14	6	6	10	16	0	26
Truck - Cargo	7	0	0	1	6	0	7
Truck - Heavy Duty	18	21	1	8	17	15	40
Truck - Light Duty	0	23	0	5	18	0	23
Truck - Medium Duty	18	179	0	38	159	0	197
Truck - Panel	0	13	0	13	0	0	13
Truck - Util Lght 4x	0	2	0	2	0	0	2
Truck - Util Light	0	4	0	0	0	4	4
Truck - Utility	9	21	18	36	12	0	48
Truck - Utility 4x4	42	1	0	33	10	0	43
Van (5)	1	0	0	1	0	0	1
Van (8)	88	506	6	296	300	4	600
Van (12)	2	6	0	3	3	2	8
Van (15)	0	243	1	33	207	4	244
Van - 4x4 (8)	2	0	0	0	0	2	2
Van - Cargo	19	2	1	4	17	1	22
Van - Cargo Compact	0	2	0	2	0	0	2

ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ACQUISITION YEAR 1995

VEHICLE TYPE	QTY ALCOHOL	QTY NAT GAS	QTY OTHER	QTY PURCHASED	QTY LEASED	QTY OWNED	TOTAL
Bus (20)	2	0	0	0	0	2	2
Bus (37)	2	0	0	0	2	0	2
Bus - Mini	1	0	0	0	0	1	1
Carryall - 4x4 Compa	0	1	0	0	1	0	1
Carryall - 4x4 Full	5	0	0	2	2	1	5
Carryall - Compact	2	0	1	0	2	1	3
Carryall - Full Size	0	5	2	5	2	0	7
Electric Cart	0	0	2	2	0	0	2
Golf Cart	0	0	41	41	0	0	41
Lab - Mobile	0	1	0	0	1	0	1
Pickup - 4x4 Compact	31	49	5	69	15	1	85
Pickup - 4x4 Full Sz	66	61	15	37	105	0	142
Pickup - 4x4 Utility	0	0	2	0	2	0	2
Pickup - Compact	1307	638	127	1121	790	161	2072
Pickup - Crew Cab	0	17	0	17	0	0	17
Pickup - Full Size	315	603	47	531	374	60	965
Sedan - Compact	2640	326	43	858	2143	8	3009
Sedan - Delivery	1	2	0	0	1	2	3
Sedan - Full Size	36	20	0	14	41	1	56
Sedan - Mid Size	183	51	12	88	148	10	246
Sedan - Subcompact	4	0	20	24	0	0	24
Sta Wgn - Compact	22	25	7	25	29	0	54
Sta Wgn - Subcompact	1	0	0	0	1	0	1
Truck - Cargo	1	0	0	0	1	0	1
Truck - Heavy 10T	2	0	0	2	0	0	2
Truck - Heavy 7.5T	0	0	1	1	0	0	1
Truck - Heavy Duty	30	21	0	10	25	16	51
Truck - Light Duty	43	34	0	17	60	0	77
Truck - Medium Duty	25	264	0	70	219	0	289
Truck - Multistop	0	0	6	6	0	0	6
Truck - Panel	10	27	0	37	0	0	37
Truck - Util Lght 4x	5	0	0	1	4	0	5
Truck - Utility	73	44	4	112	9	0	121
Truck - Utility 4x4	10	0	0	5	5	0	10

ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ACQUISITION YEAR 1994

VEHICLE TYPE	QTY ALCOHOL	QTY NAT GAS	QTY OTHER	QTY PURCHASED	QTY LEASED	QTY OWNED	TOTAL
Van - Delivery	1	2	0	0	3	0	3
Van - Maxi	2	0	0	0	2	0	2
Van - Mini	98	42	1	66	47	28	141
Van - Panel	11	35	0	28	0	18	46
Van - Step	0	1	0	0	0	1	1
Van - Utility	1	0	0	0	1	0	1
Van - Wagon	5	0	0	5	0	0	5
TOTAL	**3638**	**2693**	**190**	**2256**	**3803**	**462**	**6521**

ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ACQUISITION YEAR 1995

VEHICLE TYPE	QTY ALCOHOL	QTY NAT GAS	QTY OTHER	QTY PURCHASED	QTY LEASED	QTY OWNED	TOTAL
Van (8)	101	600	11	368	314	30	712
Van (12)	0	5	0	3	2	0	5
Van (15)	4	283	0	71	216	0	287
Van - Cargo	7	11	0	5	6	7	18
Van - Cargo 4x4	7	0	0	1	6	0	7
Van - Delivery	5	2	0	1	6	0	7
Van - Mini	107	92	1	101	84	15	200
Van - Mini Cargo	2	0	0	0	0	2	2
Van - Panel	22	47	0	52	0	17	69
Van - Utility	0	1	0	0	1	0	1
Van - Wagon	11	6	0	12	0	5	17
TOTAL	**5083**	**3236**	**347**	**3709**	**4617**	**340**	**8666**

ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ACQUISITION YEAR 1996

VEHICLE TYPE	QTY ALCOHOL	QTY NAT GAS	QTY OTHER	QTY PURCHASED	QTY LEASED	QTY OWNED	TOTAL
Bus	22	1	1	5	16	3	24
Bus (20)	1	0	0	0	0	1	1
Bus (37)	0	0	3	1	2	0	3
Carryall - 4x4 Compa	1	3	0	2	2	0	4
Carryall - 4x4 Full	4	7	0	9	2	0	11
Carryall - Compact	3	0	0	2	1	0	3
Carryall - Full Size	7	0	5	3	9	0	12
Electric Cart	0	0	4	4	0	0	4
Golf Cart	0	0	43	43	0	0	43
Pickup - 4x4 Compact	155	49	5	55	30	124	209
Pickup - 4x4 Full Sz	96	77	18	60	131	0	191
Pickup - Compact	1872	697	235	1605	944	255	2804
Pickup - Crew Cab	0	18	0	18	0	0	18
Pickup - Full Size	717	733	64	1102	336	76	1514
Sedan - Compact	3452	271	153	1447	2424	5	3876
Sedan - Full Size	37	36	0	20	53	0	73
Sedan - Mid Size	292	34	39	114	171	80	365
Sedan - Subcompact	8	3	25	28	8	0	36
Sta Wgn - Compact	9	28	9	18	28	0	46
Sta Wgn - Full Size	0	1	1	0	2	0	2
Sta Wgn - Subcompact	32	0	0	4	0	28	32
Truck - 4x4 Light Ch	0	8	0	8	0	0	8
Truck - Cargo	14	13	0	26	1	0	27
Truck - Heavy 10T	1	0	0	1	0	0	1
Truck - Heavy Duty	30	24	0	13	26	15	54
Truck - Light Chassi	0	10	0	2	0	8	10
Truck - Light Duty	60	28	0	23	65	0	88
Truck - Medium Duty	34	299	0	96	233	4	333
Truck - Multistop	9	0	0	9	0	0	9
Truck - Panel	10	29	0	39	0	0	39
Truck - Util Lght 4x	0	18	0	10	0	8	18
Truck - Util Light	0	7	0	7	0	0	7
Truck - Utility	34	71	0	104	1	0	105
Truck - Utility 4x4	5	0	0	5	0	0	5

ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ACQUISITION YEAR 1996

VEHICLE TYPE	QTY ALCOHOL	QTY NAT GAS	QTY OTHER	QTY PURCHASED	QTY LEASED	QTY OWNED	TOTAL
Van (8)	107	626	20	387	365	1	753
Van (12)	0	3	0	1	2	0	3
Van (15)	4	313	1	89	229	0	318
Van - Cargo	10	9	3	13	6	3	22
Van - Delivery	1	1	0	1	1	0	2
Van - Maxi	1	0	0	0	1	0	1
Van - Mini	119	113	68	215	69	16	300
Van - Panel	21	13	0	28	6	0	34
Van - Utility	0	3	0	1	2	0	3
Van - Wagon	8	0	0	8	0	0	8
Van - Wagon 4x4	0	9	0	2	0	7	9
Wrecker	1	0	0	0	0	1	1
TOTAL	**7177**	**3555**	**697**	**5628**	**5166**	635	11429

ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ACQUISITION YEAR 1997

VEHICLE TYPE	QTY ALCOHOL	QTY NAT GAS	QTY OTHER	QTY PURCHASED	QTY LEASED	QTY OWNED	TOTAL
Bus	22	5	0	7	18	2	27
Carryall - 4x4 Compa	1	5	0	2	0	4	6
Carryall - 4x4 Full	4	0	0	2	1	1	4
Carryall - Compact	1	0	0	0	1	0	1
Carryall - Full Size	1	10	5	12	4	0	16
Electric Cart	0	0	5	5	0	0	5
Golf Cart	0	0	45	45	0	0	45
Pickup - 4x4 Compact	150	45	10	67	26	112	205
Pickup - 4x4 Full Sz	110	86	14	77	133	0	210
Pickup - Compact	2658	1302	242	2565	1326	311	4202
Pickup - Crew Cab	0	19	0	19	0	0	19
Pickup - Full Size	912	842	109	1352	455	56	1863
Sedan - Compact	4340	269	278	1968	2919	0	4887
Sedan - Delivery	0	1	0	0	0	1	1
Sedan - Full Size	41	39	0	23	57	0	80
Sedan - Mid Size	432	34	48	162	212	140	514
Sedan - Subcompact	1	5	34	35	5	0	40
Sta Wgn - Compact	31	13	12	27	29	0	56
Sta Wgn - Full Size	0	3	0	1	2	0	3
Sta Wgn - Subcompact	54	0	0	8	0	46	54
Truck - Cargo	15	14	0	28	1	0	29
Truck - Heavy 15T	1	0	0	1	0	0	1
Truck - Heavy Duty	29	27	0	30	26	0	56
Truck - Light Chassi	0	10	0	3	0	7	10
Truck - Light Duty	59	27	0	24	62	0	86
Truck - Medium Duty	35	445	0	150	330	0	480
Truck - Multistop	3	0	0	3	0	0	3
Truck - Panel	11	30	0	41	0	0	41
Truck - Util Lght 4x	15	7	0	11	11	0	22
Truck - Utility	27	63	29	117	2	0	119
Truck - Utility 4x4	16	0	0	6	10	0	16
Truck - Utility 7.5T	1	0	0	0	1	0	1
Van (8)	102	908	15	524	501	0	1025
Van (15)	22	335	0	123	234	0	357

ALTERNATIVE FUEL FLEET ACQUISITION PLANS
VEHICLE ACQUISITION APPROACH

ACQUISITION YEAR 1997

VEHICLE TYPE	QTY ALCOHOL	QTY NAT GAS	QTY OTHER	QTY PURCHASED	QTY LEASED	QTY OWNED	TOTAL
Van - Cargo	37	27	3	38	26	3	67
Van - Cargo 3T	7	0	0	7	0	0	7
Van - Delivery	5	1	0	1	5	0	6
Van - Mini	225	143	3	248	101	22	371
Van - Mobil Lab	1	0	0	0	0	1	1
Van - Panel	15	31	0	38	1	7	46
Van - Utility	4	1	0	1	4	0	5
Van - Wagon	15	0	0	15	0	0	15
TOTAL	**9403**	**4747**	**852**	**7786**	**6503**	**713**	15002

APPENDIX B
ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
			FYEAR QUANTITY REQUESTS						
VEHICLE TYPE	FUEL TYPE	ENG SIZE	1993	1994	1995	1996	1997	FROM OEM	FROM CONV
Bus	CNG	8	0	1	0	1	4		
Bus	CNG/LNG	8	0	0	0	0	1		
Bus	Eth/Meth	12	0	0	0	1	1		
Bus	Eth/Meth	8	0	2	0	4	5		
Bus	Ethanol	8	13	16	0	15	14		
Bus	LPG	12	0	0	0	1	0		
Bus	Methanol	12	0	0	0	2	2		
Bus (20)	Methanol	12	0	0	0	1	0		
Bus (20)	Methanol	8	0	0	2	0	0		
Bus (37)	LPG	12	0	0	0	3	0		
Bus (37)	Methanol	12	0	0	2	0	0		
Bus - Mini	Methanol	8	0	0	1	0	0		
Carryall - 4x4 Compa	CNG	6	1	3	1	2	4		
Carryall - 4x4 Compa	CNG/LNG	6	0	0	0	1	1		
Carryall - 4x4 Compa	Methanol	6	2	0	0	1	1		
Carryall - 4x4 Full	CNG	8	0	0	0	5	0		
Carryall - 4x4 Full	CNG/LNG	8	0	0	0	2	0		
Carryall - 4x4 Full	Eth/Meth	8	0	1	1	1	1		
Carryall - 4x4 Full	Ethanol	8	1	4	4	3	3		
Carryall - Compact	CNG	6	12	8	0	0	0		
Carryall - Compact	CNG/LNG	6	0	2	0	0	0		
Carryall - Compact	Eth/Meth	6	0	0	0	1	0		
Carryall - Compact	Ethanol	6	1	0	2	1	1		
Carryall - Compact	LNG	6	12	3	0	0	0		
Carryall - Compact	LPG	6	1	0	1	0	0		
Carryall - Compact	Methanol	6	0	2	0	1	0		
Carryall - Full Size	CNG	8	5	6	4	0	7		
Carryall - Full Size	CNG/LNG	8	0	1	1	0	3		
Carryall - Full Size	Eth/Meth	8	0	0	0	2	0		
Carryall - Full Size	LPG	8	2	1	2	5	5		
Carryall - Full Size	Methanol	8	0	0	0	5	1		

ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
VEHICLE TYPE	FUEL TYPE	ENG SIZE	FYEAR QUANTITY REQUESTS					FROM OEM	FROM CONV
			1993	1994	1995	1996	1997		
Electric Cart	Electric	E	2	2	2	4	5		
Golf Cart	CNG	4	33	33	0	0	0		
Golf Cart	CNG/LNG	4	0	5	0	0	0		
Golf Cart	Electric	E	0	0	41	43	45		
Lab - Mobile	CNG	8	0	0	1	0	0		
Pickup - 4x4 Compact	CNG	6	12	12	34	33	26		
Pickup - 4x4 Compact	CNG	6/8	4	5	7	8	10		
Pickup - 4x4 Compact	CNG/LNG	6	0	1	6	6	5		
Pickup - 4x4 Compact	CNG/LNG	6/8	0	1	2	2	4		
Pickup - 4x4 Compact	Eth/Meth	6	0	0	3	19	21		
Pickup - 4x4 Compact	Eth/Meth	6/8	0	1	2	3	4		
Pickup - 4x4 Compact	Eth/Meth	8	0	2	1	0	0		
Pickup - 4x4 Compact	Ethanol	6	0	0	12	0	0		
Pickup - 4x4 Compact	Ethanol	8	0	3	0	0	0		
Pickup - 4x4 Compact	LPG	6	0	0	1	0	3		
Pickup - 4x4 Compact	LPG	8	1	2	4	5	7		
Pickup - 4x4 Compact	Methanol	6	0	1	1	124	115		
Pickup - 4x4 Compact	Methanol	6/8	5	6	7	9	10		
Pickup - 4x4 Compact	Methanol	8	10	10	5	0	0		
Pickup - 4x4 Full Sz	CNG	6	8	10	18	20	22		
Pickup - 4x4 Full Sz	CNG	8	50	41	25	33	36		
Pickup - 4x4 Full Sz	CNG/LNG	6	0	1	2	3	4		
Pickup - 4x4 Full Sz	CNG/LNG	8	0	6	8	13	16		
Pickup - 4x4 Full Sz	Eth/Meth	8	11	27	37	54	67		
Pickup - 4x4 Full Sz	Ethanol	8	23	16	22	33	32		
Pickup - 4x4 Full Sz	LNG	8	8	8	8	8	8		
Pickup - 4x4 Full Sz	LPG	8	8	10	15	18	14		
Pickup - 4x4 Full Sz	Methanol	8	3	5	7	9	11		
Pickup - 4x4 Utility	LPG	6	0	0	2	0	0		
Pickup - Compact	CNG	4	209	218	170	150	235		
Pickup - Compact	CNG	6	224	255	253	288	597		

ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
			FYEAR QUANTITY REQUESTS						
VEHICLE TYPE	FUEL TYPE	ENG SIZE	1993	1994	1995	1996	1997	FROM OEM	FROM CONV
Pickup - Compact	CNG	8	58	84	100	108	157		
Pickup - Compact	CNG/LNG	4	0	31	38	42	74		
Pickup - Compact	CNG/LNG	6	0	35	54	77	187		
Pickup - Compact	CNG/LNG	8	0	12	23	32	52		
Pickup - Compact	Electric	E	0	2	52	105	88		
Pickup - Compact	Eth/Meth	4	49	110	156	276	448		
Pickup - Compact	Eth/Meth	4/6	0	0	0	26	41		
Pickup - Compact	Eth/Meth	6	1	38	126	178	266		
Pickup - Compact	Eth/Meth	8	5	12		21	19		
Pickup - Compact	Ethanol	4	23	44		69	95		
Pickup - Compact	Ethanol	6	121	176	268	366	346		
Pickup - Compact	Ethanol	8	9	4	17	25	28		
Pickup - Compact	LNG	6	26	12	0	0	0		
Pickup - Compact	LPG	4	7	8	9	0	9		
Pickup - Compact	LPG	4/6	0	6	12	39	48		
Pickup - Compact	LPG	6	44	8	6	40	30		
Pickup - Compact	LPG	8	19	32	48	51	67		
Pickup - Compact	Methanol	4	286	379	542	615	895		
Pickup - Compact	Methanol	6	35	85	115	290	520		
Pickup - Compact	Methanol	8	0	15	16	6	0		
Pickup - Crew Cab	CNG	6	7	0	0	0	0		
Pickup - Crew Cab	CNG	8	9	10	14	14	14		
Pickup - Crew Cab	CNG/LNG	8	0	1	3	4	5		
Pickup - Full Size	Bio-Diesel	8	0	12	25	39	68		
Pickup - Full Size	CNG	6	117	89	112	152	110		
Pickup - Full Size	CNG	6/8	16	16	15	10	16		
Pickup - Full Size	CNG	8	340	310	336	369	469		
Pickup - Full Size	CNG/LNG	6	1	13	26	47	35		
Pickup - Full Size	CNG/LNG	6/8	0	15	3	3	6		
Pickup - Full Size	CNG/LNG	8	0	44	83	124	178		
Pickup - Full Size	Eth/Meth	6	0	28	52	96	125		

ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
			FYEAR QUANTITY REQUESTS						
VEHICLE TYPE	FUEL TYPE	ENG SIZE	1993	1994	1995	1996	1997	FROM OEM	FROM CONV
Pickup - Full Size	Eth/Meth	6/8	0	2	4	2	6		
Pickup - Full Size	Eth/Meth	8	15	17	36	103	141		
Pickup - Full Size	Ethanol	6	50	104	162	255	293		
Pickup - Full Size	Ethanol	6/8	16	14	16	8	17		
Pickup - Full Size	Ethanol	8	0	0	30	228	303		
Pickup - Full Size	LNG	6/8	153	90	0	0	0		
Pickup - Full Size	LNG	8	8	8	28	28	28		
Pickup - Full Size	LPG	6	0	1	0	1	0		
Pickup - Full Size	LPG	8	15	17	22	24	41		
Pickup - Full Size	Methanol	6	0	10	10	11	15		
Pickup - Full Size	Methanol	8	8	6	5	14	12		
Pickup - Utility	LPG	6	2	0	0	0	0		
Sedan - Compact	CNG	4	105	51	211	180	157		
Sedan - Compact	CNG	6	62	47	49	22	30		
Sedan - Compact	CNG/LNG	4	0	10	35	42	49		
Sedan - Compact	CNG/LNG	6	0	7	11	7	11		
Sedan - Compact	Electric	E	0	23	27	145	221		
Sedan - Compact	Eth/Meth	4	51	275	507	807	1120		
Sedan - Compact	Eth/Meth	6	0	15	27	39	52		
Sedan - Compact	Ethanol	4	179	224	329	505	611		
Sedan - Compact	Ethanol	6	94	96	102	99	123		
Sedan - Compact	LNG	4	89	27	20	20	22		
Sedan - Compact	LPG	4	7	9	14	5	53		
Sedan - Compact	LPG	6	7	2	2	3	4		
Sedan - Compact	Methanol	4	1341	1360	1657	1966	2377		
Sedan - Compact	Methanol	6	61	9	18	33	57		
Sedan - Compact	Methanol	8	0	0	0	3	0		
Sedan - Delivery	CNG	6	1	1	2	0	1		
Sedan - Delivery	Eth/Meth	6	0	0	1	0	0		
Sedan - Full Size	CNG	6	1	1	4	3	3		
Sedan - Full Size	CNG	8	10	18	13	27	29		

ALTERNATIVE FUEL FLEET ACQUISITION PLAN
AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
			FYEAR QUANTITY REQUESTS						
VEHICLE TYPE	FUEL TYPE	ENG SIZE	1993	1994	1995	1996	1997	FROM OEM	FROM CONV
Sedan - Full Size	CNG/LNG	6	0	0	1	1	1		
Sedan - Full Size	CNG/LNG	8	0	2	2	5	6		
Sedan - Full Size	Eth/Meth	8	2	7	11	14	16		
Sedan - Full Size	Ethanol	8	21	18	24	23	25		
Sedan - Full Size	LPG	8	1	1	0	0	0		
Sedan - Full Size	Methanol	6	0	0	1	0	0		
Sedan - Full Size	Methanol	8	0	5	0	0	0		
Sedan - Law Enf	CNG	4	13	0	0	0	0		
Sedan - Law Enf	LPG	4	9	0	0	0	0		
Sedan - Law Enf	LPG	6	1	0	0	0	0		
Sedan - Mid Size	CNG	6	9	19	43	26	25		
Sedan - Mid Size	CNG/LNG	6	0	3	8	8	9		
Sedan - Mid Size	Eth/Meth	6	2	21	35	82	135		
Sedan - Mid Size	Ethanol	6	23	13	19	26	23		
Sedan - Mid Size	LNG	6	4	0	0	0	0		
Sedan - Mid Size	LPG	6	0	6	12	39	48		
Sedan - Mid Size	Methanol	6	99	112	129	184	274		
Sedan - Mid Size	Methanol	8	5	0	0	0	0		
Sedan - Subcompact	CNG	4	2	7	0	2	4		
Sedan - Subcompact	CNG/LNG	4	0	1	0	1	1		
Sedan - Subcompact	Eth/Meth	4	0	1	0	2	0		
Sedan - Subcompact	Eth/Meth	4/6	0	0	1	0	0		
Sedan - Subcompact	Ethanol	4	2	2	0	6	1		
Sedan - Subcompact	LPG	4	9	14	20	25	34		
Sedan - Subcompact	Methanol	4	1	2	0	0	0		
Sedan - Subcompact	Methanol	4/6	0	0	3	0	0		
Sta Wgn - Compact	CNG	4	1	2	1	0	0		
Sta Wgn - Compact	CNG	6	16	3	21	24	10		
Sta Wgn - Compact	CNG/LNG	6	0	1	3	4	3		
Sta Wgn - Compact	Eth/Meth	4	2	2	3	3	4		
Sta Wgn - Compact	Eth/Meth	6	0	1	3	1	5		

ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
			FYEAR QUANTITY REQUESTS						
VEHICLE TYPE	FUEL TYPE	ENG SIZE	1993	1994	1995	1996	1997	FROM OEM	FROM CONV
Sta Wgn - Compact	Ethanol	4	0	3	2	1	4		
Sta Wgn - Compact	Ethanol	6	1	5	4	2	11		
Sta Wgn - Compact	LPG	6	3	6	7	9	12		
Sta Wgn - Compact	Methanol	1	0	1	0	0	0		
Sta Wgn - Compact	Methanol	4	1	2	0	0	1		
Sta Wgn - Compact	Methanol	6	5	0	10	2	6		
Sta Wgn - Full Size	CNG	8	0	0	0	1	2		
Sta Wgn - Full Size	CNG/LNG	8	0	0	0	0	1		
Sta Wgn - Full Size	Ethanol	8	1	0	0	0	0		
Sta Wgn - Full Size	LPG	8	0	0	0	1	0		
Sta Wgn - Subcompact	Eth/Meth	4	0	0	0	4	8		
Sta Wgn - Subcompact	Ethanol	4	0	0	1	0	0		
Sta Wgn - Subcompact	Methanol	4	1	0	0	28	46		
Truck - 4x4 Light Ch	CNG	8	0	0	0	6	0		
Truck - 4x4 Light Ch	CNG/LNG	8	0	0	0	2	0		
Truck - Cargo	CNG	6	10	0	0	10	10		
Truck - Cargo	CNG/LNG	6	0	0	0	3	4		
Truck - Cargo	Eth/Meth	6	0	1	0	3	4		
Truck - Cargo	Ethanol	6	6	6	1	1	1		
Truck - Cargo	Methanol	6	0	0	0	10	10		
Truck - Heavy 10T	Methanol	8	0	0	2	1	0		
Truck - Heavy 15T	Methanol	8	0	0	0	0	1		
Truck - Heavy 7.5T	LPG	8	0	0	1	0	0		
Truck - Heavy Duty	CNG	8	2	3	2	3	4		
Truck - Heavy Duty	CNG/LNG	8	0	3	4	6	7		
Truck - Heavy Duty	Eth/Meth	8	0	2	6	7	8		
Truck - Heavy Duty	Ethanol	8	18	14	23	23	21		
Truck - Heavy Duty	LNG	8	10	15	15	15	16		
Truck - Heavy Duty	LPG	8	0	1	0	0	0		
Truck - Heavy Duty	Methanol	8	2	2	1	0	0		
Truck - Light Chassi	CNG	8	0	0	0	8	7		

ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
VEHICLE TYPE	FUEL TYPE	ENG SIZE	FYEAR QUANTITY REQUESTS					FROM OEM	FROM CONV
			1993	1994	1995	1996	1997		
Truck - Light Chassi	CNG/LNG	8	0	0	0	2	3		
Truck - Light Duty	CNG	6	1	3	4	3	3		
Truck - Light Duty	CNG	8	17	17	24	17	17		
Truck - Light Duty	CNG/LNG	6	0	0	1	1	1		
Truck - Light Duty	CNG/LNG	8	0	3	5	6	6		
Truck - Light Duty	Eth/Meth	8	0	0	8	14	16		
Truck - Light Duty	Ethanol	8	35	0	35	45	43		
Truck - Light Duty	LNG	6	0	0	0	1	0		
Truck - Light Duty	Methanol	8	0	0	0	1	0		
Truck - Medium Duty	CNG	6	7	5	5	0	0		
Truck - Medium Duty	CNG	8	148	152	210	228	327		
Truck - Medium Duty	CNG/LNG	6	0	1	1	0	0		
Truck - Medium Duty	CNG/LNG	8	0	21	48	71	118		
Truck - Medium Duty	Eth/Meth	8	8	10	13	16	17		
Truck - Medium Duty	Ethanol	8	2	3	2	2	1		
Truck - Medium Duty	Methanol	8	3	5	10	16	17		
Truck - Multistop	Eth/Meth	8	0	0	0	2	1		
Truck - Multistop	LPG	6	1	0	6	0	0		
Truck - Multistop	LPG	8	1	0	0	0	0		
Truck - Multistop	Methanol	6	5	0	0	1	0		
Truck - Multistop	Methanol	8	1	0	0	6	2		
Truck - Panel	CNG	8	9	11	22	22	22		
Truck - Panel	CNG/LNG	8	0	2	5	7	8		
Truck - Panel	Eth/Meth	8	0	0	2	2	3		
Truck - Panel	Methanol	8	0	0	8	8	8		
Truck - Util Lght 4x	CNG	6	0	0	0	6	5		
Truck - Util Lght 4x	CNG	8	0	2	0	8	0		
Truck - Util Lght 4x	CNG/LNG	6	0	0	0	2	2		
Truck - Util Lght 4x	CNG/LNG	8	0	0	0	2	0		
Truck - Util Lght 4x	Eth/Meth	6	0	0	1	0	0		
Truck - Util Lght 4x	Eth/Meth	8	0	0	0	0	4		

ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
			FYEAR QUANTITY REQUESTS						
VEHICLE TYPE	FUEL TYPE	ENG SIZE	1993	1994	1995	1996	1997	FROM OEM	FROM CONV
Truck - Util Lght 4x	Methanol	6	0	0	4	0	0		
Truck - Util Lght 4x	Methanol	8	0	0	0	0	11		
Truck - Util Light	CNG	6	0	0	0	5	0		
Truck - Util Light	CNG	8	0	4	0	0	0		
Truck - Util Light	CNG/LNG	6	0	0	0	2	0		
Truck - Utility	CNG	6	20	6	2	0	12		
Truck - Utility	CNG	8	29	12	34	54	34		
Truck - Utility	CNG/LNG	6	0	1	0	0	4		
Truck - Utility	CNG/LNG	8	0	2	8	17	13		
Truck - Utility	Eth/Meth	6	0	1	3	7	7		
Truck - Utility	Eth/Meth	8	0	0	11	1	0		
Truck - Utility	Ethanol	4	0	0	1	0	0		
Truck - Utility	Ethanol	6	5	5	12	13	18		
Truck - Utility	Ethanol	8	0	1	2	1	1		
Truck - Utility	LPG	6	3	3	0	0	28		
Truck - Utility	LPG	8	1	15	4	0	1		
Truck - Utility	Methanol	6	0	0	1	10	1		
Truck - Utility	Methanol	8	3	2	43	2	0		
Truck - Utility 4x4	CNG	6	0	1	0	0	0		
Truck - Utility 4x4	CNG	8	1	0	0	0	0		
Truck - Utility 4x4	Eth/Meth	6	0	5	2	1	1		
Truck - Utility 4x4	Eth/Meth	8	0	0	0	0	13		
Truck - Utility 4x4	Ethanol	6	4	3	0	0	0		
Truck - Utility 4x4	LPG	6	10	0	0	0	0		
Truck - Utility 4x4	Methanol	6	50	34	8	4	2		
Truck - Utility 7.5T	Ethanol	6	0	0	0	0	1		
Van (5)	Eth/Meth	8	0	1	0	0	0		
Van (8)	CNG	6	6	14	17	48	106		
Van (8)	CNG	8	276	428	469	428	561		
Van (8)	CNG/LNG	6	0	2	4	15	38		
Van (8)	CNG/LNG	8	0	62	110	135	203		

ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
			FYEAR QUANTITY REQUESTS						
VEHICLE TYPE	FUEL TYPE	ENG SIZE	1993	1994	1995	1996	1997	FROM OEM	FROM CONV
Van (8)	Electric	E	1	2	1	1	1		
Van (8)	Eth/Meth	6	0	2	2	3	4		
Van (8)	Eth/Meth	8	5	15	30	36	41		
Van (8)	Ethanol	6	0	1	0	0	0		
Van (8)	Ethanol	8	1	0	4	8	4		
Van (8)	LPG	6	19	0	0	0	0		
Van (8)	LPG	8	6	4	10	19	14		
Van (8)	Methanol	6	65	10	10	10	10		
Van (8)	Methanol	8	19	60	55	50	43		
Van (12)	CNG	6	0	3	0	0	0		
Van (12)	CNG	8	18	2	4	2	0		
Van (12)	CNG/LNG	6	0	1	0	0	0		
Van (12)	CNG/LNG	8	0	0	1	1	0		
Van (12)	Methanol	8	0	2	0	0	0		
Van (15)	CNG	8	242	210	220	229	236		
Van (15)	CNG/LNG	8	0	30	53	74	89		
Van (15)	Electric	E	0	1	0	0	0		
Van (15)	Eth/Meth	8	0	0	1	1	6		
Van (15)	Ethanol	8	0	0	3	1	7		
Van (15)	LNG	8	2	3	10	10	10		
Van (15)	LPG	8	0	0	0	1	0		
Van (15)	Methanol	8	3	0	0	2	9		
Van - 4x4 (8)	Methanol	8	0	2	0	0	0		
Van - Cargo	CNG	6	1	1	3	4	9		
Van - Cargo	CNG	8	0	1	6	3	11		
Van - Cargo	CNG/LNG	6	0	0	0	1	3		
Van - Cargo	CNG/LNG	8	0	0	2	1	4		
Van - Cargo	Eth/Meth	6	0	0	1	2	4		
Van - Cargo	Eth/Meth	8	0	2	0	0	6		
Van - Cargo	Ethanol	6	0	1	0	1	0		
Van - Cargo	LPG	6	9	1	0	3	3		

ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
VEHICLE TYPE	FUEL TYPE	ENG SIZE	FYEAR QUANTITY REQUESTS					FROM OEM	FROM CONV
			1993	1994	1995	1996	1997		
Van - Cargo	Methanol	6	0	3	4	7	11		
Van - Cargo	Methanol	8	6	13	2	0	16		
Van - Cargo 3T	Eth/Meth	8	0	0	0	0	2		
Van - Cargo 3T	Methanol	8	0	0	0	0	5		
Van - Cargo 4x4	Eth/Meth	6	0	0	1	0	0		
Van - Cargo 4x4	Methanol	6	0	0	6	0	0		
Van - Cargo Compact	CNG	6	0	2	0	0	0		
Van - Delivery	CNG	8	0	2	2	1	1		
Van - Delivery	Eth/Meth	8	0	0	1	0	1		
Van - Delivery	Ethanol	8	0	1	0	1	4		
Van - Delivery	Methanol	8	0	0	4	0	0		
Van - Maxi	Ethanol	8	2	2	0	1	0		
Van - Mini	CNG	4	2	0	0	5	5		
Van - Mini	CNG	6	187	32	74	79	100		
Van - Mini	CNG	8	0	2	1	2	0		
Van - Mini	CNG/LNG	4	0	0	0	2	2		
Van - Mini	CNG/LNG	6	0	5	17	25	36		
Van - Mini	Electric	E	0	1	0	67	0		
Van - Mini	Eth/Meth	4	0	2	0	2	6		
Van - Mini	Eth/Meth	6	0	11	20	26	61		
Van - Mini	Ethanol	4	0	0	0	0	1		
Van - Mini	Ethanol	6	28	55	63	80	90		
Van - Mini	Ethanol	8	0	1	1	1	2		
Van - Mini	LNG	6	1	3	0	0	0		
Van - Mini	LPG	4	0	0	0	0	1		
Van - Mini	LPG	6	0	0	1	1	2		
Van - Mini	Methanol	4	2	3	1	6	11		
Van - Mini	Methanol	6	9	22	22	4	54		
Van - Mini	Methanol	8	0	4	0	0	0		
Van - Mini Cargo	Ethanol	8	1	0	0	0	0		
Van - Mini Cargo	Methanol	6	0	0	2	0	0		

ALTERNATIVE FUEL FLEET ACQUISITION PLAN AND VEHICLE AVAILABILITY

DATA FROM FEDERAL FLEET REQUIREMENTS								EARLIEST AVAILABILITY	
VEHICLE TYPE	FUEL TYPE	ENG SIZE	FYEAR QUANTITY REQUESTS					FROM OEM	FROM CONV
			1993	1994	1995	1996	1997		
Van - Mobil Lab	Ethanol	8	0	0	0	0	1		
Van - Panel	CNG	6	2	13	15	10	10		
Van - Panel	CNG	8	11	18	23	0	13		
Van - Panel	CNG/LNG	6	0	2	4	3	4		
Van - Panel	CNG/LNG	8	0	2	5	0	4		
Van - Panel	Eth/Meth	6	0	1	3	3	4		
Van - Panel	Eth/Meth	8	0	0	1	2	0		
Van - Panel	Ethanol	8	0	0	0	0	1		
Van - Panel	Methanol	6	0	10	12	10	10		
Van - Panel	Methanol	8	0	0	6	6	0		
Van - Panel 4x4	CNG	6	3	0	0	0	0		
Van - Step	CNG	6	9	0	0	0	0		
Van - Step	LNG	8	13	1	0	0	0		
Van - Utility	CNG	6	0	0	1	2	1		
Van - Utility	CNG/LNG	6	0	0	0	1	0		
Van - Utility	Eth/Meth	6	0	0	0	0	1		
Van - Utility	Ethanol	6	0	0	0	0	2		
Van - Utility	Methanol	6	0	1	0	0	1		
Van - Wagon	CNG	8	0	0	5	0	0		
Van - Wagon	CNG/LNG	8	0	0	1	0	0		
Van - Wagon	Eth/Meth	6	0	0	1	0	0		
Van - Wagon	Eth/Meth	8	0	1	1	2	4		
Van - Wagon	Ethanol	8	3	4	5	6	11		
Van - Wagon	Methanol	6	0	0	4	0	0		
Van - Wagon 4x4	CNG	8	0	0	0	7	0		
Van - Wagon 4x4	CNG/LNG	8	0	0	0	2	0		
Wrecker	Methanol	8	0	0	0	1	0		
TOTALS			5707	6521	8666	11429	15002		

APPENDIX C
PLANNED ALTERNATIVE FUEL FLEET SIZE BY STATE AND TYPE OF FUEL

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
STATE OF TBD						
TBD	Bio-Diesel	0	12	25	39	68
Total in TB using Bio-Diesel		0	12	25	39	68
TBD	CNG	650	725	721	723	985
Total in TB using CNG		650	725	721	723	985
TBD	CNG/LNG	0	328	577	805	1201
Total in TB using CNG/LNG		0	328	577	805	1201
TBD	Electric	0	3	23	86	95
Total in TB using Electric		0	3	23	86	95
TBD	Eth/Meth	0	449	940	1633	2396
Total in TB using Eth/Meth		0	449	940	1633	2396
TBD	Ethanol	274	475	715	1142	1393
Total in TB using Ethanol		274	475	715	1142	1393
TBD	LPG	25	57	86	130	194
Total in TB using LPG		25	57	86	130	194
TBD	Methanol	405	415	492	544	582
Total in TB using Methanol		405	415	492	544	582
Total AFVs in TB		1354	2464	3579	5102	6914
STATE OF AK						
Anchorage Fairbanks	CNG CNG	2 0	4 0	5 2	9 2	13 5
Total in AK using CNG		2	4	7	11	18
Jefferson	Eth/Meth	0	0	0	0	5
Total in AK using Eth/Meth		0	0	0	0	5
TBD	Ethanol	0	1	0	0	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Adak	Ethanol	0	0	0	1	0
Total in AK using Ethanol		0	1	0	1	0
Adak	Methanol	1	0	0	0	0
Anchorage	Methanol	12	16	19	23	32
Total in AK using Methanol		13	16	19	23	32
Total AFVs in AK		15	21	26	35	55
STATE OF AL						
Anniston	CNG	3	3	5	5	7
Daleville	CNG	2	2	3	3	4
Huntsville	CNG	2	2	3	4	5
Tuscaloosa	CNG	3	0	0	0	7
Tuscumbia	CNG	0	2	0	0	0
Tuskegee	CNG	0	0	2	0	0
Total in AL using CNG		10	9	13	12	23
Muscle Shoals	Electric	0	0	0	35	50
Total in AL using Electric		0	0	0	35	50
TBD	Ethanol	2	1	3	3	2
Auburn	Ethanol	0	0	0	2	0
Muscle Shoals	Ethanol	0	0	2	70	85
Titus	Ethanol	0	0	1	0	0
Total in AL using Ethanol		2	1	6	75	87
Anniston	Methanol	8	13	16	20	25
Birmingham	Methanol	9	12	17	23	32
Daleville	Methanol	6	8	12	16	20
Huntsville	Methanol	10	14	19	24	31
Mobile	Methanol	0	0	0	0	1
Total in AL using Methanol		33	47	64	83	109
Total AFVs in AL		45	57	83	205	269
STATE OF AR						
Pine Bluff	CNG	1	1	2	2	3
Total in AR using CNG		1	1	2	2	3

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Searcy	Ethanol	0	0	0	1	0
Stuttgart	Ethanol	0	0	0	0	2
Vilonia	Ethanol	1	0	0	0	0
Total in AR using Ethanol		1	0	0	1	2
Fort Smith	Methanol	2	3	5	7	9
Little Rock	Methanol	7	9	12	16	23
Pine Bluff	Methanol	2	3	4	5	7
Total in AR using Methanol		11	15	21	28	39
Total AFVs in AR		13	16	23	31	44
STATE OF AZ						
Ft. Huachuca	CNG	4	4	5	7	7
Kingman	CNG	0	0	1	1	1
Phoenix	CNG	10	7	17	15	22
Safford	CNG	0	0	2	3	3
Tucson	CNG	0	10	10	4	0
Yuma	CNG	23	5	7	7	8
Total in AZ using CNG		37	26	42	37	41
Parker	Electric	2	2	2	3	4
Total in AZ using Electric		2	2	2	3	4
Keams Canyon	Eth/Meth	11	15	19	23	27
Parker	Eth/Meth	14	16	20	25	25
Phoenix	Eth/Meth	0	0	0	10	20
Sacaton	Eth/Meth	7	10	17	22	30
San Carlos	Eth/Meth	11	11	20	19	21
Whiteriver	Eth/Meth	3	0	0	0	10
Total in AZ using Eth/Meth		46	52	76	99	133
TBD	Ethanol	4	2	3	1	0
Phoenix	Ethanol	3	4	7	6	10
Whiteriver	Ethanol	3	8	12	16	10
Total in AZ using Ethanol		10	14	22	23	20
Sells	LNG	16	16	16	16	16
Total in AZ using LNG		16	16	16	16	16

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Page	LPG	3	0	0	0	0
Peach Springs	LPG	4	4	6	7	9
Whiteriver	LPG	8	8	17	22	26
Total in AZ using LPG		15	12	23	29	35
Ft. Huachuca	Methanol	13	17	21	27	35
Page	Methanol	0	1	0	1	1
Peach Springs	Methanol	2	3	4	5	5
Phoenix	Methanol	6	6	9	13	19
Yuma	Methanol	4	5	7	10	14
Total in AZ using Methanol		25	32	41	56	74
Total AFVs in AZ		151	154	222	263	323
STATE OF CA						
TBD	CNG	244	263	282	252	270
Alameda	CNG	0	4	0	0	0
Bakersfield	CNG	2	1	2	3	8
Barstow	CNG	1	1	2	2	3
El Toro	CNG	0	2	0	0	0
Folsom	CNG	1	2	3	3	3
Fresno	CNG	2	2	1	1	0
Herlong	CNG	1	1	2	2	3
Laguna Niguel	CNG	0	0	0	1	0
Lake Berryessa	CNG	1	1	0	1	0
Lathrop	CNG	1	1	2	2	3
Livermore	CNG	0	2	2	2	2
Long Beach	CNG	27	32	29	29	39
Los Angeles	CNG	1	0	2	1	0
Menlo Park	CNG	0	0	0	0	6
Miramar	CNG	10	17	20	20	25
Oakland	CNG	0	3	0	0	0
Oceanside	CNG	229	27	24	23	128
Redding	CNG	0	1	3	3	2
Riverside	CNG	3	1	3	7	11
Sacramento	CNG	5	7	6	9	6
San Diego	CNG	132	166	243	243	282
San Francisco	CNG	97	24	36	45	4
Susanville	CNG	0	0	6	11	14
Tracy	CNG	2	3	2	3	3
Ukiah	CNG	0	0	1	2	2
Weaverville	CNG	0	1	1	0	0
Willows	CNG	1	1	1	1	2
Total in CA using CNG		760	563	673	666	816

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
San Francisco	Electric	0	1	0	0	1
Total in CA using Electric		0	1	0	0	1
Escondido	Eth/Meth	0	0	0	10	5
Livermore	Eth/Meth	60	60	60	60	60
Los Angeles	Eth/Meth	0	0	1	0	0
Sacramento	Eth/Meth	0	0	0	1	0
San Bruno	Eth/Meth	7	7	7	7	7
San Francisco	Eth/Meth	1	0	1	0	1
San Jose	Eth/Meth	0	0	0	1	0
Total in CA using Eth/Meth		68	67	69	79	73
TBD	Ethanol	0	4	8	5	5
Alameda	Ethanol	0	2	0	0	0
Albany	Ethanol	0	1	0	0	0
Davis	Ethanol	0	1	0	0	0
Laguna Niguel	Ethanol	0	0	0	0	3
Lemoore	Ethanol	0	1	0	0	0
Los Angeles	Ethanol	2	0	0	0	2
Menlo Park	Ethanol	6	7	9	10	14
No. Highlands	Ethanol	0	0	0	0	4
Oakland	Ethanol	0	1	0	0	0
Sacramento	Ethanol	4	4	3	5	4
Salinas	Ethanol	0	0	0	0	4
San Diego	Ethanol	2	0	0	0	0
San Francisco	Ethanol	0	0	10	0	1
San Jose	Ethanol	0	1	0	0	0
Shingle Springs	Ethanol	0	0	1	0	0
Total in CA using Ethanol		14	22	31	20	37
Alameda	LPG	0	1	0	0	0
Barstow	LPG	0	1	0	0	0
El Toro	LPG	103	21	7	40	81
Imperial Beach	LPG	0	1	0	0	0
Monterey	LPG	0	1	0	0	0
Oakland	LPG	0	5	0	0	0
Oceanside	LPG	0	1	0	0	0
Port Hueneme	LPG	0	1	0	0	0
Sacramento	LPG	0	1	0	0	0
Stockton	LPG	0	1	0	0	0
Total in CA using LPG		103	34	7	40	81
TBD	Methanol	137	193	200	164	129
29 Palms	Methanol	0	0	2	27	1
Alameda	Methanol	0	5	0	0	0
Anaheim	Methanol	0	1	0	0	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Barstow	Methanol	4	6	9	22	32
Bell	Methanol	1	0	0	0	0
Berkely	Methanol	6	0	0	0	0
Burbank	Methanol	0	1	0	0	0
Canoga Park	Methanol	1	1	0	0	0
China Lake	Methanol	0	0	0	37	50
El Segundo	Methanol	1	1	0	0	0
El Toro	Methanol	6	0	0	0	0
Fresno	Methanol	0	1	3	1	4
Fullerton	Methanol	0	1	0	0	0
Herlong	Methanol	2	4	6	8	11
Huntington Beach	Methanol	0	1	0	0	0
Laguna Niguel	Methanol	4	5	1	6	5
Lathrop	Methanol	4	5	7	9	12
Lemoore	Methanol	9	14	22	22	27
Long Beach	Methanol	10	6	12	12	25
Los Angeles	Methanol	79	33	31	39	51
Menlo Park	Methanol	0	0	4	0	0
Miramar	Methanol	12	3	10	10	10
Newport Beach	Methanol	0	1	0	0	0
No. Highlands	Methanol	1	4	2	5	8
Oakland	Methanol	2	7	5	6	8
Oceanside	Methanol	124	82	73	20	53
Orange	Methanol	51	0	0	0	0
Pico Rivera	Methanol	0	1	0	0	0
Point Mugu	Methanol	13	23	36	36	41
Pomona	Methanol	0	1	0	0	0
Port Hueneme	Methanol	6	11	15	15	15
Redding	Methanol	0	1	0	0	1
Redondo Beach	Methanol	0	1	0	0	0
Sacramento	Methanol	55	3	1	6	1
San Bernardino	Methanol	0	1	0	0	0
San Bruno	Methanol	0	1	0	0	0
San Diego	Methanol	65	15	15	20	15
San Francisco	Methanol	62	4	7	9	7
San Jose	Methanol	1	1	8	2	0
Santa Ana	Methanol	0	1	0	0	1
Seal Beach	Methanol	0	10	15	15	20
Stockton	Methanol	0	7	0	10	0
Sunnyvale	Methanol	0	2	0	0	0
Van Nuys	Methanol	0	1	0	0	0
West Los Angeles	Methanol	0	1	0	0	0
West San Pedro	Methanol	1	1	0	0	0
Woodland Hills	Methanol	0	1	0	0	0
Total in CA using Methanol		657	462	484	501	543
Total AFVs in CA		1602	1149	1264	1306	1551

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
STATE OF CO						
TBD	CNG	79	0	0	0	0
Alamosa	CNG	0	0	1	1	1
Aurora	CNG	1	1	1	2	2
Boulder	CNG	0	2	0	0	0
Canon City	CNG	1	2	1	2	2
Craig	CNG	1	1	4	6	7
Denver	CNG	15	20	22	40	36
Dever	CNG	0	0	1	0	0
Durango	CNG	0	1	0	0	0
Golden	CNG	4	4	0	7	0
Grand Junction	CNG	1	4	2	3	4
Lakewood	CNG	0	20	16	43	34
Montrose	CNG	4	10	5	10	6
Pueblo	CNG	2	2	3	4	5
San Juan	CNG	0	0	1	2	2
Total in CO using CNG		108	67	57	120	99
Durango	CNG/LNG	0	0	1	0	0
Total in CO using CNG/LNG		0	0	1	0	0
Golden	Electric	0	0	0	0	10
Total in CO using Electric		0	0	0	0	10
Denver	Eth/Meth	5	5	0	0	12
Grand Junction	Eth/Meth	3	3	3	3	3
Total in CO using Eth/Meth		8	8	3	3	15
TBD	Ethanol	10	7	3	3	2
Akron	Ethanol	0	0	0	0	3
Denver	Ethanol	6	12	17	20	24
Fort Collins	Ethanol	0	1	0	0	4
Golden	Ethanol	0	0	5	0	10
Lakewood	Ethanol	1	0	0	0	0
Total in CO using Ethanol		17	20	25	23	43
Collbran	LPG	3	2	2	1	1
Golden	LPG	0	2	10	0	0
Loveland	LPG	4	6	7	6	9
Total in CO using LPG		7	10	19	7	10
Aurora	Methanol	2	3	5	6	9

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Boulder	Methanol	0	4	4	2	0
Colorado Springs	Methanol	6	8	11	13	17
Denver	Methanol	10	12	13	21	21
Estes Park	Methanol	0	0	0	0	70
Pueblo	Methanol	8	12	14	18	22
Total in CO using Methanol		26	39	47	60	139
Total AFVs in CO		166	144	152	213	316
STATE OF CT						
Hartford	Eth/Meth	0	0	1	0	0
Total in CT using Eth/Meth		0	0	1	0	0
Hartford	Ethanol	0	1	0	0	0
Wellingford	Ethanol	0	0	0	1	0
Total in CT using Ethanol		0	1	0	1	0
Hartford	Methanol	5	7	11	15	16
Total in CT using Methanol		5	7	11	15	16
Total AFVs in CT		5	8	12	16	16
STATE OF CU						
Roosevelt Roads,Cuba	Ethanol	0	0	1	0	0
Total in CU using Ethanol		0	0	1	0	0
Total AFVs in CU		0	0	1	0	0
STATE OF DC						
Washington	CNG	93	60	187	172	206
Total in DC using CNG		93	60	187	172	206
Washington	Electric	0	1	1	0	7
Total in DC using Electric		0	1	1	0	7
Washington	Eth/Meth	0	1	0	0	6

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total in DC using Eth/Meth		0	1	0	0	6
Washington	Ethanol	7	1	6	4	3
Total in DC using Ethanol		7	1	6	4	3
Washington	LPG	1	1	1	3	0
Total in DC using LPG		1	1	1	3	0
Washington	Methanol	41	25	75	57	102
Total in DC using Methanol		41	25	75	57	102
Total AFVs in DC		142	89	270	236	324
STATE OF DE						
Wilmington	Ethanol	1	0	0	1	0
Total in DE using Ethanol		1	0	0	1	0
Wilmington	Methanol	2	3	5	6	9
Total in DE using Methanol		2	3	5	6	9
Total AFVs in DE		3	3	5	7	9
STATE OF FL						
Altamonte Spgs	CNG	0	0	0	0	5
Gulf Breeze	CNG	0	1	1	0	0
Miami	CNG	0	1	3	0	0
Tallahassee	CNG	6	0	1	8	0
Total in FL using CNG		6	2	5	8	5
Miami	Eth/Meth	1	0	1	0	0
Total in FL using Eth/Meth		1	0	1	0	0
TBD	Ethanol	0	1	0	0	0
Canal Point	Ethanol	0	0	0	3	0
FT. Lauderdale	Ethanol	0	0	0	0	3
Gainesville	Ethanol	0	0	3	3	5
Jacksonville	Ethanol	0	0	1	0	0
Miami	Ethanol	0	0	2	3	0
Orlando	Ethanol	0	1	0	0	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Pensacola	Ethanol	0	0	1	0	0
Total in FL using Ethanol		0	2	7	9	8
Jacksonville	Methanol	1	0	0	0	1
Miami	Methanol	8	11	15	20	27
Pensacola	Methanol	1	0	0	0	0
Tampa	Methanol	0	0	0	6	0
Total in FL using Methanol		10	11	15	26	28
Total AFVs in FL		17	15	28	43	41
STATE OF GA						
Atlanta	CNG	23	17	20	34	36
Augusta	CNG	2	2	3	3	4
Columbus	CNG	2	2	3	3	4
Hinesville	CNG	2	2	2	2	3
Marietta	CNG	0	10	0	2	0
Total in GA using CNG		29	33	28	44	47
Athens	Eth/Meth	0	1	0	1	1
Atlanta	Eth/Meth	1	0	0	0	0
Total in GA using Eth/Meth		1	1	0	1	1
TBD	Ethanol	2	8	6	3	1
Athens	Ethanol	7	2	1	0	2
Atlanta	Ethanol	1	1	5	1	0
Macon	Ethanol	1	0	0	1	0
Savannah	Ethanol	0	2	0	3	3
Total in GA using Ethanol		11	13	12	8	6
Atlanta	LPG	0	0	0	10	20
Total in GA using LPG		0	0	0	10	20
Atlanta	Methanol	15	27	40	44	61
Augusta	Methanol	6	8	11	13	18
Chamblee	Methanol	0	0	0	0	2
Columbus	Methanol	8	10	14	18	24
Doraville	Methanol	0	0	1	0	1
Hinesville	Methanol	8	11	15	21	33
Macon	Methanol	0	1	0	0	1
Total in GA using Methanol		37	57	81	96	140

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total AFVs in GA		78	104	121	159	214
STATE OF HI						
Honolulu	CNG	2	2	2	4	4
Total in HI using CNG		2	2	2	4	4
TBD	Ethanol	0	1	1	1	0
Honolulu	Ethanol	1	0	0	0	0
Total in HI using Ethanol		1	1	1	1	0
Honolulu	Methanol	19	24	30	38	51
Total in HI using Methanol		19	24	30	38	51
Total AFVs in HI		22	27	33	43	55
STATE OF IA						
Iowa City	CNG	5	0	0	0	3
Middletown	CNG	1	1	2	2	3
Total in IA using CNG		6	1	2	2	6
Ames	Electric	0	0	2	0	0
Total in IA using Electric		0	0	2	0	0
TBD	Ethanol	0	0	2	2	0
Ames	Ethanol	2	0	4	0	0
Boone	Ethanol	1	0	0	0	0
Des Moines	Ethanol	1	9	5	2	11
Total in IA using Ethanol		4	9	11	4	11
Des Moines	Methanol	6	8	11	14	20
Middletown	Methanol	2	3	4	6	8
Total in IA using Methanol		8	11	15	20	28
Total AFVs in IA		18	21	30	26	45

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
STATE OF ID						
Boise	CNG	9	6	5	9	14
Burley	CNG	0	1	2	7	7
Coeur d'Alene	CNG	0	1	1	2	2
Idaho Falls	CNG	0	1	1	2	3
Salmon	CNG	1	2	0	0	0
Shoshone	CNG	0	0	1	1	1
Total in ID using CNG		10	11	10	21	27
TBD	Ethanol	1	1	0	1	0
Dubois	Ethanol	0	0	0	0	3
Total in ID using Ethanol		1	1	0	1	3
Boise	LPG	0	1	2	1	1
Burley	LPG	0	1	0	0	0
Total in ID using LPG		0	2	2	1	1
Boise	Methanol	8	8	17	14	20
Total in ID using Methanol		8	8	17	14	20
Total AFVs in ID		19	22	29	37	51
STATE OF IL						
Argonne	CNG	7	8	6	10	0
Batavia	CNG	13	7	4	2	7
Chicago	CNG	4	7	2	5	8
Chicago (ARCS)	CNG	0	0	0	0	4
Rock Island	CNG	1	1	2	2	3
Urbana	CNG	0	7	0	0	0
Total in IL using CNG		25	30	14	19	22
Chicago	Eth/Meth	1	0	1	0	1
Total in IL using Eth/Meth		1	0	1	0	1
TBD	Ethanol	0	0	1	2	0
Chicago	Ethanol	2	2	0	2	2
Peoria	Ethanol	4	3	3	2	0
Springfield	Ethanol	9	3	0	1	2
Urbana	Ethanol	0	0	4	3	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total in IL using Ethanol		15	8	8	10	4
Argonne	Methanol	2	0	6	0	0
Chicago	Methanol	20	19	25	29	32
Great Lakes	Methanol	0	0	0	0	68
Joliet	Methanol	1	2	3	4	5
Rock Island	Methanol	2	4	5	7	9
Savanna	Methanol	1	2	3	4	6
Total in IL using Methanol		26	27	42	44	120
Total AFVs in IL		67	65	65	73	147
STATE OF IN						
Charlestown	CNG	1	1	2	2	3
Indianapolis	CNG	1	1	2	2	3
Total in IN using CNG		2	2	4	4	6
TBD	Ethanol	3	5	3	0	0
Bloomington	Ethanol	0	1	0	0	0
Indianapolis	Ethanol	10	0	0	8	0
Total in IN using Ethanol		13	6	3	8	0
Charlestown	Methanol	5	7	8	10	13
Indianapolis	Methanol	10	15	21	27	37
Madison	Methanol	1	2	3	4	5
Merrillville	Methanol	0	1	0	0	1
Newport	Methanol	1	2	2	2	3
Porter	Methanol	0	0	0	0	68
Total in IN using Methanol		17	27	34	43	127
Total AFVs in IN		32	35	41	55	133
STATE OF JP						
Yokosuka, Japan	Ethanol	0	0	0	1	0
Total in JP using Ethanol		0	0	0	1	0
Total AFVs in JP		0	0	0	1	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
STATE OF KS						
Lawrence	CNG	0	8	0	0	0
Leavenworth	CNG	1	1	1	1	2
Ogden	CNG	2	2	3	3	4
Pittsburg	CNG	1	1	2	2	3
Total in KS using CNG		4	12	6	6	9
TBD	Ethanol	4	5	7	2	1
Manhattan	Ethanol	0	0	0	0	5
Wichita	Ethanol	0	0	0	0	1
Total in KS using Ethanol		4	5	7	2	7
Kansas City	Methanol	2	4	5	8	11
Leavenworth	Methanol	2	4	6	7	9
Ogden	Methanol	7	9	11	13	19
Pittsburg	Methanol	2	4	5	7	9
Wichita	Methanol	8	11	16	20	27
Total in KS using Methanol		21	32	43	55	75
Total AFVs in KS		29	49	56	63	91
STATE OF KY						
Ashland	CNG	0	0	2	0	2
Fort Knox	CNG	2	2	2	3	4
La Fayette	CNG	1	1	2	1	2
Lexington	CNG	1	3	5	6	7
Louisville	CNG	0	4	0	0	0
Paducah	CNG	0	0	0	0	7
Total in KY using CNG		4	10	11	10	22
Louisville	Eth/Meth	0	0	0	1	0
Total in KY using Eth/Meth		0	0	0	1	0
TBD	Ethanol	4	0	0	2	1
Lexington	Ethanol	0	0	0	0	1
Total in KY using Ethanol		4	0	0	2	2
Louisville	LNG	0	0	0	0	2
Total in KY using LNG		0	0	0	0	2

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Lexington	LPG	0	0	1	0	0
Paducah	LPG	7	0	7	0	7
Total in KY using LPG		7	0	8	0	7
Covington	Methanol	0	0	0	0	2
Fort Knox	Methanol	5	7	9	13	17
[illegible] Fayette	Methanol	4	6	8	11	16
[illegible]xington	Methanol	2	4	6	8	10
[illegible]ouisville	Methanol	5	6	9	12	19
Total in KY using Methanol		16	23	32	44	64
Total AFVs in KY		31	33	51	57	97
STATE OF LA						
Jefferson	CNG	0	0	0	3	0
New Orleans	CNG	26	8	40	13	28
Pickering	CNG	2	2	4	4	5
Shreveport	CNG	1	1	1	2	3
Total in LA using CNG		29	11	45	22	36
TBD	Ethanol	3	4	5	2	1
Alexandria	Ethanol	0	4	0	0	0
Baton Rouge	Ethanol	0	0	3	0	0
Houma	Ethanol	0	0	2	0	0
Total in LA using Ethanol		3	8	10	2	1
Baton Rouge	LPG	0	1	0	0	0
Jefferson	LPG	0	0	0	0	2
Total in LA using LPG		0	1	0	0	2
New Orleans	Methanol	18	13	11	15	19
Pickering	Methanol	7	10	14	20	27
Shreveport	Methanol	4	5	6	8	12
Total in LA using Methanol		29	28	31	43	58
Total AFVs in LA		61	48	86	67	97
STATE OF MA						
Ayer	CNG	1	1	2	2	3

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Boston	CNG	5	3	13	29	42
Lowell	CNG	8	2	8	2	18
Total in MA using CNG		14	6	23	33	63
Boston	Eth/Meth	1	1	0	0	0
Total in MA using Eth/Meth		1	1	0	0	0
Boston	Ethanol	2	5	0	5	5
Total in MA using Ethanol		2	5	0	5	5
Boston	LNG	0	0	0	1	0
Total in MA using LNG		0	0	0	1	0
Ayer	Methanol	7	10	14	17	22
Boston	Methanol	16	27	31	31	54
Marlborough	Methanol	0	0	0	5	0
Springfield	Methanol	1	2	2	2	4
Total in MA using Methanol		24	39	47	55	80
Total AFVs in MA		41	51	70	94	148
STATE OF MD						
Aberdeen	CNG	3	4	4	4	5
Annapolis	CNG	1	1	1	0	1
Baltimore	CNG	4	2	3	3	10
Beltsville	CNG	0	0	1	0	0
Cascade	CNG	1	1	1	2	2
Frederick	CNG	1	1	1	1	2
Greenbelt	CNG	0	4	4	4	2
Hyattsville	CNG	0	0	1	2	0
Laurel	CNG	6	8	10	6	7
Rockville	CNG	0	0	2	0	0
Towson	CNG	0	5	0	0	6
Total in MD using CNG		16	26	28	22	35
Annapolis	Electric	0	0	0	1	0
Total in MD using Electric		0	0	0	1	0
Baltimore	Eth/Meth	1	3	2	2	2
Total in MD using Eth/Meth		1	3	2	2	2

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Baltimore	Ethanol	7	8	6	8	8
Beltsville	Ethanol	2	2	3	6	3
Columbia	Ethanol	2	0	0	0	0
Fort Meade	Ethanol	0	0	1	0	0
Greenbelt	Ethanol	2	1	0	1	0
Hyattsville	Ethanol	0	0	1	0	0
Total in MD using Ethanol		13	11	11	15	11
Aberdeen	LPG	0	0	1	0	0
Bethesda	LPG	0	10	20	40	40
Total in MD using LPG		0	10	21	40	40
Aberdeen	Methanol	13	19	23	27	31
Adelphi	Methanol	2	3	3	4	5
Annapolis	Methanol	7	8	11	15	20
Baltimore	Methanol	8	12	15	17	23
Berlin	Methanol	0	0	0	120	0
Cascade	Methanol	2	3	5	6	9
Frederick	Methanol	2	3	5	6	8
Hyattsville	Methanol	0	0	0	2	0
Landover	Methanol	0	0	1	0	0
Rockville	Methanol	6	8	3	2	2
Sharpsburg	Methanol	0	0	38	0	0
Wheaton	Methanol	0	0	0	2	1
Total in MD using Methanol		40	56	104	201	99
Total AFVs in MD		70	106	166	281	187
STATE OF ME						
TBD	Ethanol	1	1	1	2	1
Augusta	Ethanol	0	0	1	0	0
Brunswick	Ethanol	0	0	0	0	1
Total in ME using Ethanol		1	1	2	2	2
Portland	Methanol	5	7	10	14	20
Total in ME using Methanol		5	7	10	14	20
Total AFVs in ME		6	8	12	16	22

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
STATE OF MI						
Baraga	CNG	0	0	0	0	1
Warren	CNG	1	1	2	2	3
Total in MI using CNG		1	1	2	2	4
Detroit	Eth/Meth	0	1	0	0	0
Total in MI using Eth/Meth		0	1	0	0	0
TBD	Ethanol	4	3	3	3	3
East Lansing	Ethanol	4	0	0	0	0
Sault St. Marie	Ethanol	0	1	0	0	0
Total in MI using Ethanol		8	4	3	3	3
Detroit	Methanol	7	9	12	18	25
Warren	Methanol	2	5	6	8	10
Total in MI using Methanol		9	14	18	26	35
Total AFVs in MI		18	20	23	31	42
STATE OF MN						
Cass Lake	CNG	0	0	0	0	1
Minneapolis	CNG	0	1	1	1	0
Twin Cities	CNG	3	8	8	11	20
Total in MN using CNG		3	9	9	12	21
St. Paul	Eth/Meth	0	0	0	1	0
Total in MN using Eth/Meth		0	0	0	1	0
Bemidji	Ethanol	0	0	1	0	0
Brooklyn Ctr.	Ethanol	0	1	0	0	1
Cass Lake	Ethanol	2	0	1	0	0
Red Lake	Ethanol	0	0	0	1	1
St Cloud	Ethanol	0	0	1	0	0
St. Paul	Ethanol	0	1	6	0	1
Twin Cities	Ethanol	2	3	3	4	5
Total in MN using Ethanol		4	5	12	5	8
Minneapolis	Methanol	8	10	14	21	21
Twin Cities	Methanol	2	3	3	0	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total in MN using Methanol		10	13	17	21	32
Total AFVs in MN		17	27	38	39	61
STATE OF MO						
Kansas City	CNG	0	0	2	6	1
Rolla	CNG	0	2	1	0	1
Saint Robert	CNG	2	2	3	3	4
Total in MO using CNG		2	4	6	9	6
TBD	Ethanol	1	4	4	2	2
Clayton	Ethanol	0	0	0	0	1
Columbia	Ethanol	0	0	0	0	6
Independence	Ethanol	0	1	0	0	0
Kansas City	Ethanol	2	4	1	0	7
St. Louis	Ethanol	0	0	0	0	1
Stockton	Ethanol	0	0	0	1	0
Total in MO using Ethanol		3	9	5	3	17
Rolla	LPG	0	0	1	0	0
Total in MO using LPG		0	0	1	0	0
Cape Girardeau	Methanol	0	0	0	0	1
Independence	Methanol	2	3	4	6	9
Kansas City	Methanol	0	0	2	2	0
Saint Robert	Methanol	4	5	7	9	13
St. Louis	Methanol	7	10	14	17	23
Total in MO using Methanol		13	18	27	34	46
Total AFVs in MO		18	31	39	46	69
STATE OF MS						
TBD	Ethanol	2	1	1	1	1
Jackson	Ethanol	1	4	0	1	0
Stoneville	Ethanol	0	0	3	1	0
Total in MS using Ethanol		3	5	4	3	1
Columbus	Methanol	0	0	1	0	0
Gulf Port	Methanol	1	2	3	4	5
Jackson	Methanol	11	21	19	25	39

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total in MS using Methanol		12	23	23	29	44
Total AFVs in MS		15	28	27	32	45
STATE OF MT						
Billings	CNG	13	7	9	9	6
Box Elder	CNG	2	3	5	4	4
Browning	CNG	10	11	6	12	10
Busby	CNG	3	3	1	2	2
Butte	CNG	2	1	0	1	1
Crow Agency	CNG	12	10	11	9	9
Dickinson	CNG	0	0	1	0	0
Harlem	CNG	8	8	9	7	8
Lame Deer	CNG	6	5	10	6	8
Lewistown	CNG	2	2	1	3	4
Miles City	CNG	3	1	3	4	6
Poplar	CNG	7	10	8	13	6
Total in MT using CNG		68	61	64	70	64
Billings	Eth/Meth	0	0	0	0	5
Total in MT using Eth/Meth		0	0	0	0	5
Billings	Ethanol	1	11	0	0	2
Bozeman	Ethanol	0	2	6	0	0
Helena	Ethanol	0	1	0	1	0
Total in MT using Ethanol		1	14	6	1	2
Billings	LPG	1	2	3	2	0
Hungry Horse	LPG	0	0	1	1	0
Total in MT using LPG		1	2	4	3	0
Great Falls	Methanol	4	5	7	9	13
West Glacier	Methanol	0	0	0	0	134
Total in MT using Methanol		4	5	7	9	147
Total AFVs in MT		74	82	81	83	218
STATE OF NC						
Fayetteville	CNG	4	4	6	6	7
Raleigh	CNG	1	0	0	0	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total in NC using CNG		5	4	6	6	7
TBD	Ethanol	0	0	4	2	4
Greensboro	Ethanol	0	0	0	0	1
Oxford	Ethanol	0	0	0	3	0
Raleigh	Ethanol	0	2	0	3	1
Total in NC using Ethanol		0	2	4	8	6
Res. Triangle	LPG	0	0	0	10	10
Total in NC using LPG		0	0	0	10	10
Charlotte	Methanol	8	11	15	20	27
Fayetteville	Methanol	18	25	29	37	50
Greensboro	Methanol	0	0	0	2	1
Raleigh	Methanol	0	5	0	0	7
Sunny Point	Methanol	2	3	5	7	11
Total in NC using Methanol		28	44	49	66	9[illegible]
Total AFVs in NC		33	50	59	90	119
STATE OF ND						
Belcourt	CNG	0	0	0	5	0
Bismarck	CNG	3	9	6	7	11
Fort Yates	CNG	0	0	0	2	0
Total in ND using CNG		3	9	6	14	11
TBD	Ethanol	1	2	1	0	0
Belcourt	Ethanol	20	19	15	15	20
Bismarck	Ethanol	0	8	0	0	7
Fargo	Ethanol	0	1	0	0	1
Fort Totten	Ethanol	5	1	6	6	5
Fort Yates	Ethanol	23	15	18	22	21
Grand Forks	Ethanol	0	0	0	0	1
New Town	Ethanol	11	10	12	14	14
Wahpeton	Ethanol	1	1	1	1	2
Total in ND using Ethanol		61	57	53	58	71
Fargo	Methanol	6	8	11	14	19
Total in ND using Methanol		6	8	11	14	19
Total AFVs in ND		70	74	70	86	101

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
STATE OF NE						
Lincoln	CNG	0	0	4	0	0
Total in NE using CNG		0	0	4	0	0
Grand Island	Eth/Meth	3	8	6	6	3
Total in NE using Eth/Meth		3	8	6	6	3
TBD	Ethanol	1	1	2	0	0
Clay Center	Ethanol	0	3	4	4	3
Lincoln	Ethanol	1	0	0	0	1
Omaha	Ethanol	0	0	0	0	3
Stapleton	Ethanol	0	1	0	0	0
Winnebago	Ethanol	4	1	5	7	5
Total in NE using Ethanol		6	6	11	11	12
Omaha	Methanol	6	8	11	15	21
Total in NE using Methanol		6	8	11	15	21
Total AFVs in NE		15	22	32	32	36
STATE OF NH						
TBD	Ethanol	0	2	1	0	0
Total in NH using Ethanol		0	2	1	0	0
Manchester	Methanol	4	5	7	9	14
Total in NH using Methanol		4	5	7	9	14
Total AFVs in NH		4	7	8	9	14
STATE OF NJ						
Eatontown	CNG	1	1	2	2	3
Iselin	CNG	0	1	0	0	0
Picatinny	CNG	1	1	2	2	3
Trenton	CNG	0	0	0	0	3
W. Trenton	CNG	0	0	6	0	0
West Orange	CNG	0	0	2	0	0
Wrightstown	CNG	2	2	3	3	4

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total in NJ using CNG		4	5	15	7	13
Newark	Eth/Meth	2	2	2	0	0
Parsippany	Eth/Meth	0	0	0	0	1
Total in NJ using Eth/Meth		2	2	2	0	1
Bayonne	Methanol	1	2	4	4	5
Belle Mead	Methanol	0	0	0	3	0
Cherry Hill	Methanol	0	0	1	0	0
Clifton	Methanol	0	0	1	0	0
Eatontown	Methanol	2	4	5	7	9
Edison	Methanol	0	0	0	0	1
Newark	Methanol	10	15	18	29	36
Picatinny	Methanol	4	6	6	7	9
Springfield	Methanol	0	0	1	0	0
Wayne	Methanol	0	0	1	0	0
Wrightstown	Methanol	5	5	8	7	9
Total in NJ using Methanol		22	32	45	57	69
Total AFVs in NJ		28	39	62	64	83
STATE OF NM						
Albuquerque	CNG	8	4	11	15	1
Farmington	CNG	2	4	4	4	7
Las Cruces	CNG	1	1	1	3	3
Roswell	CNG	0	3	2	4	3
Santa Fe	CNG	0	3	19	11	10
Taos	CNG	0	1	0	0	0
White Sands	CNG	3	4	4	4	5
Total in NM using CNG		14	20	41	41	29
Albuquerque	Eth/Meth	0	0	0	10	20
Total in NM using Eth/Meth		0	0	0	10	20
TBD	Ethanol	3	5	4	1	2
Albuquerque	Ethanol	4	0	0	0	0
Corrales	Ethanol	1	0	0	0	0
T or C	Ethanol	1	0	0	0	1
White Sands	Ethanol	0	0	1	0	0
Total in NM using Ethanol		9	5	5	1	3
T or C	LPG	2	1	2	0	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total in NM using LPG		2	1	2	0	0
Albuquerque	Methanol	7	8	16	20	21
Santa Fe	Methanol	1	0	0	0	0
White Sands	Methanol	12	18	22	25	31
Total in NM using Methanol		20	26	38	45	52
Total AFVs in NM		45	52	86	97	104
STATE OF NV						
Battle Mountain	CNG	0	1	2	4	4
Boulder City	CNG	30	6	6	4	4
Carson City	CNG	0	1	4	6	6
Elko	CNG	0	3	3	3	3
Ely	CNG	0	1	2	3	3
Hawthorne	CNG	1	1	2	2	3
Las Vegas	CNG	2	2	2	1	2
Reno	CNG	0	2	1	1	2
Winnemucca	CNG	1	1	1	2	2
Total in NV using CNG		34	18	23	26	29
Las Vegas	Electric	0	0	0	1	0
Total in NV using Electric		0	0	0	1	0
TBD	Ethanol	0	1	1	1	2
Reno	Ethanol	0	1	0	0	0
Total in NV using Ethanol		0	2	1	1	2
Las Vegas	LNG	310	154	65	65	65
Total in NV using LNG		310	154	65	65	65
Elko	Methanol	5	7	8	9	10
Hawthorne	Methanol	2	4	5	6	8
Las Vegas	Methanol	0	0	0	0	2
Reno	Methanol	4	3	5	6	9
Total in NV using Methanol		11	14	18	21	29
Total AFVs in NV		355	188	107	114	125

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
STATE OF NY						
Albany	CNG	0	0	4	0	0
New York	CNG	21	3	22	29	71
Romulus	CNG	2	2	3	3	4
Upton	CNG	4	8	8	10	13
Watertown	CNG	1	1	1	1	2
West Point	CNG	2	2	2	4	4
Total in NY using CNG		30	16	40	47	9-
Buffalo	Eth/Meth	0	1	1	0	0
Jamaica	Eth/Meth	1	1	1	0	0
New York	Eth/Meth	7	1	1	0	1
Total in NY using Eth/Meth		8	3	3	0	1
TBD	Ethanol	0	3	4	3	3
New York	Ethanol	1	5	0	0	0
Rochester	Ethanol	0	1	0	0	0
Syracuse	Ethanol	5	0	0	0	0
Total in NY using Ethanol		6	9	4	3	3
Brooklyn	Methanol	0	0	1	0	0
Buffalo	Methanol	0	0	0	0	1
New York	Methanol	19	30	37	53	67
Romulus	Methanol	5	7	9	12	16
Watertown	Methanol	5	7	10	12	15
West Point	Methanol	6	7	9	10	13
Total in NY using Methanol		35	51	66	87	112
Total AFVs in NY		79	79	113	137	210
STATE OF OH						
Cincinnati	CNG	0	0	0	2	2
Cleveland	CNG	1	4	2	0	2
Columbus	CNG	0	0	5	0	7
Total in OH using CNG		1	4	7	2	11
Cincinnati	Eth/Meth	0	1	0	0	0
Cleveland	Eth/Meth	1	0	0	0	0
Total in OH using Eth/Meth		1	1	0	0	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
TBD	Ethanol	2	2	2	2	1
Columbus	Ethanol	0	3	1	0	1
Wooster	Ethanol	0	0	3	0	0
Total in OH using Ethanol		2	5	6	2	2
Brecksville	Methanol	0	0	0	0	54
Cincinnati	Methanol	1	1	2	2	3
Cleveland	Methanol	6	8	11	15	21
Columbus	Methanol	0	0	0	1	0
Piketon	Methanol	10	14	26	10	22
Ravenna	Methanol	1	2	2	3	4
Total in OH using Methanol		18	25	41	31	104
Total AFVs in OH		22	35	54	35	117
STATE OF OK						
TBD	CNG	35	0	0	0	0
Ada	CNG	1	0	1	0	0
Lawton	CNG	2	2	3	3	4
McAlester	CNG	1	1	2	2	3
Oklahoma City	CNG	5	0	0	1	0
Tulsa	CNG	1	2	0	0	0
Total in OK using CNG		45	5	6	6	7
Oklahoma City	Eth/Meth	0	0	0	0	5
Total in OK using Eth/Meth		0	0	0	0	5
Durant	Ethanol	0	0	0	2	0
El Reno	Ethanol	0	0	0	0	4
Norman	Ethanol	0	0	0	1	0
Oklahoma City	Ethanol	0	0	0	2	0
Stillwater	Ethanol	0	0	0	3	4
Woodward	Ethanol	0	0	0	2	0
Total in OK using Ethanol		0	0	0	10	8
Ada	LPG	0	0	2	3	0
Anadarko	LPG	2	1	0	0	0
Miami	LPG	0	0	1	0	2
Muskogee	LPG	4	3	1	1	1
Pawhuska	LPG	0	2	2	2	3
Talihina	LPG	2	0	0	0	0
Wewoka	LPG	1	1	0	0	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total in OK using LPG		9	7	6	6	6
Lawton	Methanol	6	8	10	12	16
McAlester	Methanol	4	6	8	10	12
Oklahoma City	Methanol	8	11	15	19	28
Total in OK using Methanol		18	25	33	41	56
Total AFVs in OK		72	37	45	63	82
STATE OF OR						
Albany	CNG	4	0	0	0	0
Burns	CNG	0	0	2	3	3
Coos Bay	CNG	0	2	3	3	3
Corvallis	CNG	1	0	0	0	0
Eugene	CNG	0	1	3	5	5
Klamath	CNG	0	1	0	0	0
Lakeview	CNG	0	0	3	4	7
Medford	CNG	0	1	3	7	7
Portland	CNG	9	13	22	13	30
Prineville	CNG	0	0	1	4	4
Roseburg	CNG	0	2	5	8	10
Salem	CNG	4	2	3	5	7
Vale	CNG	0	0	3	5	6
Total in OR using CNG		18	22	48	57	82
Corvallis	Electric	0	0	0	1	0
Total in OR using Electric		0	0	0	1	0
Corvallis	Ethanol	0	0	0	0	5
Portland	Ethanol	1	6	0	4	5
Total in OR using Ethanol		1	6	0	4	10
Bend	LPG	0	2	2	2	2
Total in OR using LPG		0	2	2	2	2
Corvallis	Methanol	0	0	0	0	1
Hermiston	Methanol	1	2	2	3	4
Portland	Methanol	7	7	15	21	24
Total in OR using Methanol		8	9	17	24	29
Total AFVs in OR		27	39	67	88	123

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
STATE OF PA						
Bensalem	CNG	0	0	1	0	0
Carlisle	CNG	1	1	2	2	3
Chambersburg	CNG	2	2	3	3	4
Gettysburg	CNG	2	11	4	2	4
Harrisburg	CNG	1	0	2	3	2
Lemoyne	CNG	0	0	6	0	0
Philadelphia	CNG	10	6	6	9	19
Pittsburgh	CNG	7	6	5	3	4
Scranton	CNG	0	0	1	0	0
Wilkes-Barre	CNG	1	1	1	0	2
Total in PA using CNG		24	27	31	22	38
Philadelphia	Eth/Meth	0	1	0	1	0
Pittsburgh	Eth/Meth	0	0	0	1	0
Total in PA using Eth/Meth		0	1	0	2	0
Bensalem	Ethanol	0	1	0	0	1
Bethlehem	Ethanol	0	0	0	0	2
Harrisburg	Ethanol	2	0	1	0	0
Jenkintown	Ethanol	0	0	0	1	0
Lancaster	Ethanol	0	1	2	0	0
Philadelphia	Ethanol	0	0	1	3	0
Wilkes-Barre	Ethanol	0	0	1	0	0
Total in PA using Ethanol		2	2	5	4	3
Harrisburg	LPG	0	0	0	1	0
Philadelphia	LPG	0	0	1	0	0
Total in PA using LPG		0	0	1	1	0
Annville	Methanol	2	3	5	7	10
Carlisle	Methanol	2	4	6	8	12
Chambersburg	Methanol	3	5	7	9	11
New Cumberland	Methanol	3	4	7	9	13
Oakdale	Methanol	2	2	4	4	[illegible]
Philadelphia	Methanol	13	21	31	22	[illegible]
Pittsburgh	Methanol	0	0	0	1	[illegible]
Scranton	Methanol	0	0	1	0	[illegible]
Tobyhanna	Methanol	1	3	3	3	[illegible]
Valley Forge	Methanol	0	52	0	0	
Total in PA using Methanol		26	94	64	63	
Total AFVs in PA		52	124	101	92	

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
STATE OF PR						
Santurce	Ethanol	3	3	0	0	0
Total in PR using Ethanol		3	3	0	0	0
San Juan	Methanol	0	0	0	0	6
Total in PR using Methanol		0	0	0	0	6
Total AFVs in PR		3	3	0	0	6
STATE OF RI						
Narragansatt	Ethanol	1	1	2	0	0
Total in RI using Ethanol		1	1	2	0	0
Narragansatt	LNG	0	0	0	0	1
Total in RI using LNG		0	0	0	0	1
Narragansatt Providence	Methanol Methanol	0 5	0 6	0 9	1 13	0 17
Total in RI using Methanol		5	6	9	14	17
Total AFVs in RI		6	7	11	14	18
STATE OF SC						
Aiken Columbia	CNG CNG	133 2	233 2	226 3	186 3	201 4
Total in SC using CNG		135	235	229	189	205
Aiken	Electric	0	20	93	203	138
Total in SC using Electric		0	20	93	203	138
Columbia Florence	Ethanol Ethanol	2 0	5 0	0 0	4 2	0 0
Total in SC using Ethanol		2	5	0	6	0
Charleston	Methanol	1	0	0	0	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Columbia	Methanol	17	17	23	27	46
Total in SC using Methanol		18	17	23	27	46
Total AFVs in SC		155	277	345	425	389
STATE OF SD						
Aberdeen	CNG	0	0	7	0	0
Agency Village	CNG	0	0	0	1	0
Eagle Butte	CNG	5	5	0	0	0
Fort Thompson	CNG	0	0	0	1	0
Huron	CNG	0	0	5	0	7
Lower Brule	CNG	0	0	0	1	0
Total in SD using CNG		5	5	12	3	7
Sioux Falls	Eth/Meth	0	1	1	1	6
Total in SD using Eth/Meth		0	1	1	1	6
TBD	Ethanol	2	2	2	1	1
Aberdeen	Ethanol	10	2	6	9	9
Agency Village	Ethanol	0	2	3	1	2
Eagle Butte	Ethanol	12	6	16	19	18
Flandreau	Ethanol	4	1	3	4	4
Fort Thompson	Ethanol	8	7	8	6	8
Huron	Ethanol	0	1	0	0	0
Lower Brule	Ethanol	9	9	12	12	11
Pine Ridge	Ethanol	23	9	32	31	29
Rosebud	Ethanol	12	11	12	16	15
Wagner	Ethanol	0	0	1	3	4
Total in SD using Ethanol		80	50	95	102	101
Sioux Falls	Methanol	6	8	11	14	20
Total in SD using Methanol		6	8	11	14	20
Total AFVs in SD		91	64	119	120	134
STATE OF TN						
Camden	CNG	0	0	2	0	0
Erin	CNG	0	0	2	0	0
Kingsport	CNG	1	1	2	2	3
Knoxville	CNG	1	4	4	34	60
Milan	CNG	1	1	2	2	3

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Nashville	CNG	0	0	0	40	75
Oak Ridge	CNG	27	0	29	0	35
Total in TN using CNG		30	6	41	78	176
Chattanooga	Electric	1	1	2	35	55
Total in TN using Electric		1	1	2	35	55
TBD	Ethanol	2	2	2	1	1
Chattanooga	Ethanol	1	0	0	70	85
Knoxville	Ethanol	0	2	2	70	85
Nashville	Ethanol	1	4	0	1	1
Norris	Ethanol	0	1	0	0	0
Total in TN using Ethanol		4	9	4	142	172
Chattanooga	Methanol	2	2	0	0	0
Gallatin	Methanol	0	0	2	0	0
Gatlinburg	Methanol	0	0	0	0	214
Kingsport	Methanol	4	6	7	8	12
Memphis	Methanol	8	10	14	17	24
Milan	Methanol	4	6	7	9	13
Nashville	Methanol	1	1	0	1	6
Oak Ridge	Methanol	38	2	43	2	92
Total in TN using Methanol		57	27	73	37	361
Total AFVs in TN		92	43	120	292	764
STATE OF TX						
Amarillo	CNG	2	1	0	0	1
Austin	CNG	0	0	3	14	4
Beaumont	CNG	0	8	8	8	0
Corpus Christi	CNG	12	4	4	4	0
Dallas	CNG	0	2	0	1	1
El Paso	CNG	6	4	7	3	4
Ellis County	CNG	18	18	12	7	0
Ft. Worth	CNG	0	3	2	2	6
Houston	CNG	0	2	1	0	2
Killeen	CNG	2	2	3	3	4
Longview	CNG	1	0	1	1	0
Marshall	CNG	1	1	2	2	2
Masterson	CNG	0	0	0	1	0
San Antonio	CNG	1	1	2	2	3
Texarkana	CNG	1	2	2	2	4
Tyler	CNG	0	1	0	0	1

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total in TX using CNG		44	49	47	50	32
Dallas/Fort Worth	Eth/Meth	0	0	1	0	0
Total in TX using Eth/Meth		0	0	1	0	0
Beaumont	Ethanol	0	1	0	0	2
Bushland	Ethanol	0	0	0	3	2
Canadian	Ethanol	0	0	1	0	0
College Station	Ethanol	1	0	0	3	4
El Paso	Ethanol	0	1	1	2	1
Killeen	Ethanol	0	0	0	0	1
Weslaco	Ethanol	0	2	0	0	4
Total in TX using Ethanol		1	4	2	8	14
El Paso	LPG	0	0	0	0	1
Total in TX using LPG		0	0	0	0	1
Dallas	Methanol	0	0	0	0	2
El Paso	Methanol	6	8	10	12	15
Ellis County	Methanol	42	42	15	9	0
Fort Worth	Methanol	2	4	7	9	11
Ft. Worth	Methanol	3	2	6	6	9
Houston	Methanol	12	17	22	29	40
Killeen	Methanol	11	16	22	27	34
Marshall	Methanol	4	6	7	9	13
San Antonio	Methanol	4	6	8	11	12
South Houston	Methanol	0	0	1	0	0
Texarkana	Methanol	2	4	6	8	11
Total in TX using Methanol		86	105	104	120	147
Total AFVs in TX		131	158	154	178	194
STATE OF UT						
Cedar City	CNG	0	3	2	2	2
Dugway	CNG	2	2	3	3	4
Moab	CNG	1	4	1	1	1
Ogden	CNG	1	1	1	1	3
Richfield	CNG	0	2	3	3	3
Salt Lake City	CNG	3	4	3	3	5
Vernal	CNG	0	1	0	0	0
Total in UT using CNG		7	17	13	13	18
Provo	CNG/LNG	1	1	0	0	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Total in UT using CNG/LNG		1	1	0	0	0
Dutch John	Electric	0	2	0	0	0
Total in UT using Electric		0	2	0	0	0
Fort Duchesne	Eth/Meth	10	17	16	20	21
Total in UT using Eth/Meth		10	17	16	20	21
TBD	Ethanol	3	1	1	0	1
Logan	Ethanol	0	0	0	0	3
Riverton	Ethanol	0	0	0	0	1
Sandy	Ethanol	0	0	0	0	1
Total in UT using Ethanol		3	1	1	0	6
Dutch John	LPG	4	1	0	0	0
Total in UT using LPG		4	1	0	0	0
Cedar City	Methanol	3	6	9	12	14
Dugway	Methanol	5	7	9	11	15
Salt Lake City	Methanol	8	9	12	16	23
Total in UT using Methanol		16	22	30	39	52
Total AFVs in UT		41	61	60	72	97
STATE OF VA						
Alexandria	CNG	1	1	1	5	7
Arlington	CNG	0	0	0	8	21
Blackstone	CNG	1	1	2	2	3
Ft Belvoir	CNG	2	2	2	4	5
Hampton	CNG	2	2	3	3	4
Herndon	CNG	1	1	1	0	0
Newport News	CNG	2	2	3	3	4
Norfolk	CNG	0	0	2	3	0
Petersburg	CNG	1	15	2	2	2
Radford	CNG	2	2	3	3	4
Reston	CNG	5	0	1	0	1
Richmond	CNG	4	4	0	9	0
Wallops Island	CNG	0	4	3	3	7
Warrenton	CNG	0	1	0	0	1
Total in VA using CNG		21	35	23	45	59

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Norfolk	Eth/Meth	0	0	1	0	0
Total in VA using Eth/Meth		0	0	1	0	0
Alexandria	Ethanol	2	0	1	1	0
Annandale	Ethanol	1	0	0	0	0
Norfolk	Ethanol	0	0	0	3	6
Reston	Ethanol	0	1	1	0	0
Richmond	Ethanol	4	0	0	0	0
Total in VA using Ethanol		7	1	2	4	6
Alexandria	Methanol	7	7	9	13	15
Arlington	Methanol	15	13	34	22	46
Arlington Hall	Methanol	0	10	0	15	0
Bailey's Xrds	Methanol	0	0	1	0	0
Blackstone	Methanol	2	3	4	7	10
Bristol	Methanol	0	0	0	0	1
Falls Church	Methanol	7	9	11	13	17
Fredericksburg	Methanol	2	3	5	7	11
Ft Belvoir	Methanol	3	4	6	7	9
Hampton	Methanol	10	13	14	16	19
Luray	Methanol	0	13	0	0	0
McLean	Methanol	0	0	13	0	0
Newport News	Methanol	2	4	5	8	11
Norfolk	Methanol	0	0	2	3	0
Petersburg	Methanol	2	4	5	7	9
Radford	Methanol	4	6	8	10	13
Richmond	Methanol	7	10	14	19	27
Vint Hill Farms	Methanol	0	0	0	0	8
Warrenton	Methanol	3	5	8	10	5
Total in VA using Methanol		64	104	139	157	201
Total AFVs in VA		92	140	165	206	266
STATE OF VT						
TBD	Ethanol	0	1	1	0	0
Total in VT using Ethanol		0	1	1	0	0
Burlington	Methanol	2	3	5	6	9
Total in VT using Methanol		2	3	5	6	9
Total AFVs in VT		2	4	6	6	9

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
STATE OF WA						
Grand Coulee	CNG	0	0	0	0	2
Seattle	CNG	0	2	0	2	2
Spokane	CNG	1	2	0	0	0
Tacoma	CNG	2	2	3	3	8
Total in WA using CNG		3	6	3	5	12
Seattle	Eth/Meth	0	0	2	10	5
Total in WA using Eth/Meth		0	0	2	10	5
TBD	Ethanol	1	2	1	1	0
Prosser	Ethanol	0	2	0	0	1
Pullman	Ethanol	0	1	0	3	4
Richland	Ethanol	65	17	102	95	33
Seattle	Ethanol	0	0	0	1	0
Spokane	Ethanol	5	0	0	3	0
Total in WA using Ethanol		71	22	103	103	38
Ephrata	LPG	0	2	2	2	0
Grand Coulee	LPG	2	0	2	2	4
Yakima	LPG	0	2	0	0	2
Total in WA using LPG		2	4	4	4	6
Seattle	Methanol	8	9	16	18	27
Tacoma	Methanol	9	12	17	24	26
Total in WA using Methanol		17	21	33	42	53
Total AFVs in WA		93	53	145	164	114
STATE OF WI						
Ashland	CNG	0	0	0	3	1
Madison	CNG	0	2	2	0	6
Milwaukee	CNG	0	0	1	1	1
Sparta	CNG	2	2	3	3	5
Total in WI using CNG		2	4	6	7	13
Milwaukee	Eth/Meth	0	0	0	1	0
Total in WI using Eth/Meth		0	0	0	1	0

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
TBD	Ethanol	0	1	2	0	4
Ashland	Ethanol	5	1	0	1	0
Crandon	Ethanol	0	0	0	2	0
Eau Claire	Ethanol	0	0	1	0	0
Hayward	Ethanol	0	1	1	0	0
LaCrosse	Ethanol	1	0	0	2	0
Madison	Ethanol	0	1	0	0	0
Milwaukee	Ethanol	0	0	4	0	0
Total in WI using Ethanol		6	4	8	5	4
Madison	LPG	0	0	0	0	2
Total in WI using LPG		0	0	0	0	2
Baraboo	Methanol	1	2	3	4	6
Milwaukee	Methanol	7	11	13	16	23
Sparta	Methanol	11	16	19	25	32
Total in WI using Methanol		19	29	35	45	61
Total AFVs in WI		27	37	49	58	80
STATE OF WV						
Charleston	CNG	1	2	0	3	2
Glen Jean	CNG	2	4	0	0	24
Wheeling	CNG	1	1	1	1	1
Total in WV using CNG		4	7	1	4	27
Morgantown	Ethanol	1	0	0	0	0
Total in WV using Ethanol		1	0	0	0	0
Huntington	Methanol	6	8	11	15	22
Total in WV using Methanol		6	8	11	15	22
Total AFVs in WV		11	15	12	19	49
STATE OF WY						
Casper	CNG	0	1	0	0	0
Cheyenne	CNG	1	5	2	1	5
Fort Washakie	CNG	10	13	8	10	13
Rawlins	CNG	0	3	2	2	3
Rock Springs	CNG	3	1	1	1	2

ALTERNATIVE FUEL FLEET ACQUISITION
BY GEOGRAPHIC LOCATION

CITY	FUEL TYPE	FYEAR QUANTITY REQUESTS				
		93	94	95	96	97
Worland	CNG	1	1	1	1	1
Total in WY using CNG		15	24	14	15	24
Fontenelle	Electric	0	1	0	0	0
Total in WY using Electric		0	1	0	0	0
TBD	Ethanol	0	0	1		2
Casper	Ethanol	0	0	4		0
Fort Washakie	Ethanol	0	0	1		0
Total in WY using Ethanol		0	0	6	1	2
Mills	LPG	10	3	12	7	7
Total in WY using LPG		10	3	12	7	7
Cheyenne	Methanol	7	8	11	15	20
Moose	Methanol	0	0	0	94	0
Yellowstone N.P.	Methanol	0	0	0	176	0
Total in WY using Methanol		7	8	11	285	20
Total AFVs in WY		32	36	43	308	53

APPENDIX D
PLANNED ALTERNATIVE FUEL FLEET SIZE BY FEDERAL AGENCY

PLANNED ALTERNATIVE FUEL FLEET SIZE
BY FEDERAL AGENCY
(AGENCY OWNED AND LEASED VEHICLES)

FEDERAL AGENCY	TOTAL ALTERNATIVE FUEL VEHICLE ACQUISITIONS				
	FY93	FY94	FY95	FY96	FY97
Agriculture	431	668	900	1310	1614
CIA	2	3	17	18	16
Commerce	10	16	26	33	49
DOE	787	611	760	686	737
DOT	1417	1486	1585	1563	1826
Defense	2005	1812	2305	2776	3849
EPA	35	27	26	21	28
FERC	3	3	8	8	9
GSA	43	53	68	135	179
GSA - Additional Leased Vehicles (Agency TBD)	N/A	801	1581	2602	3824
HHS	9	20	30	111	148
HUD	5	30	30	30	23
Interior	853	841	1153	1636	1971
NASA	14	20	16	14	17
NRC	6	8	5	2	2
State	18	10	20	6	16
TVA	5	10	12	350	490
Treasury	39	64	74	67	124
VA	25	38	50	61	80
Subtotal GSA Leased Vehicles	3782	3802	4611	5160	6494
Subtotal Agency Owned Vehicles	1925	2719	4055	6269	8508
Total Agency Requests	**5707**	**6521**	**8666**	**11429**	**15002**

APPENDIX E
FIVE-YEAR PLAN DATABASE SAMPLE

ALTERNATIVE FUEL VEHICLES 5-YEAR PLAN SUMMARY

AGENCY	SUB-AGENCY	SUB2	FISCAL YEAR	VEHICLE TYPE	VEHICLE CODE	ENG SIZE (CYL)	ALTERNATE FUEL	CONFIG-URATION	ACQUISITION APPROACH	QTY OEM	QTY CONV	CITY	ST
DOE	Chicago	Ames	1995	Compact Pickup	Pickup - Compact	E	Electric	Dedicated	Leased-GSA	2	0	Ames	IA
					Subtotal of Procurements for 1995:					2	0		
					Subtotal of Procurements for Ames:					2	0		
DOE	Chicago	Argonne	1993	Compact Sedan	Sedan - Compact	4	Methanol	Flexible	Purchased	2	0	Argonne	IL
DOE	Chicago	Argonne	1993	Carryall Van	Carryall - Compact	6	CNG	Dedicated	Purchased	7	0	Argonne	IL
					Subtotal of Procurements for 1993:					9	0		
DOE	Chicago	Argonne	1994	Carryall Van	Carryall - Compact	6	CNG	Dedicated	Purchased	3	0	Argonne	IL
DOE	Chicago	Argonne	1994	Panel Van	Van - Panel	6	CNG	Dedicated	Purchased	3	0	Argonne	IL
DOE	Chicago	Argonne	1994	12 Pass Step Van	Van (12)	8	CNG	Dedicated	Purchased	2	0	Argonne	IL
					Subtotal of Procurements for 1994:					8	0		
DOE	Chicago	Argonne	1995	Mid-Size Sedan	Sedan - Mid Size	6	Methanol	Flexible	Purchased	6	0	Argonne	IL
DOE	Chicago	Argonne	1995	Full Size Pickup	Pickup - Full Size	6	CNG	Dedicated	Purchased	6	0	Argonne	IL
					Subtotal of Procurements for 1995:					12	0		
DOE	Chicago	Argonne	1996	Full Size Pickup	Pickup - Full Size	8	CNG	Dedicated	Purchased	10	0	Argonne	IL
					Subtotal of Procurements for 1996:					10	0		
					Subtotal of Procurements for Argonne:					39	0		
DOE	Chicago	Brookhav	1993	Compact Pickup	Pickup - Compact	6	CNG	Dedicated	Purchased	2	0	Upton	NY